ORDER NO. MOD84030381C1

Service Manual

Microwave Oven

NE-7865, NE-7865C
NE-7860, NE-7860C
NE-7845

NE-7865, NE-7860, NE-7845 for U.S.A.
NE-7865C, NE-7860C for Canada

Specifications

Power Source :	120 V AC Single Phase 60 Hz
Power Requirement :	1,420 W : (12.4 A)
Output :	700 W : Full Power
Oscillation Frequency :	2,450 MHz
Magnetron :	2M204-M1/(2M107A-209)
Timer :	99 min. 99 sec./9 hr. 99 min.
Outside Dimensions :	24" (W) × 18" (D) × 14-3/4" (H) 607 mm (W) × 458 mm (D) × 375 mm (H)
Oven Cavity Dimensions :	15-9/16" (W) × 15-9/16" (D) × 10" (H) 395 mm (W) × 395 mm (D) × 249 mm (H)
Weight :	48 lbs (22.0 kg)
Specifications subject to change without notice.	

Panasonic®

Matsushita Engineering and Service Company
50 Meadowland Parkway,
Secaucus. New Jersey 07094

Panasonic Hawaii Inc.
91-238 Kauhi St. Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774

Matsushita Electric of Canada Limited
5770 Ambler Drive, Mississauga,
Ontario, L4W 2T3

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc.
Ave, 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

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WARNING

1. This product should be serviced only by trained qualified personnel.
2. Though this product has been manufactured in compliance with :
   "Federal Performance Standard 21 CFR Subchapter J" (D.H.H.S.): NE-7865, NE-7860 and NE-7845 or "Radiation Emitting Devices Act" (NHW) : NE-7865C and NE-7860C.
   It is very important all repairs should be made in accordance with procedures described in this manual to avoid being exposed to excessive microwave radiation.
3. Check for radiation leakage after every servicing according to the "Procedure for measuring radiation leakage"on page 34.
4. Any serviceman who learns of any accident pertaining to microwave radiation leakage should immediately notify the appropriate address listed below.

IN U.S.A. (MESCO)	Matsushita Engineering and Service Company 50 Meadowland Parkway, Secaucus, New Jersey 07094 Attention : Engineering Support Division. (201) 348-7000
IN HAWAII (PHI)	PANASONIC HAWAII, INC. 91-238 Kauhi St. Ewa Beach P.O. Box 774 Honolulu, Hawaii 96808-0774 (808) 682-2851
IN PUERTO RICO (PSC)	PANASONIC SALES COMPANY, Division of Matsushita Electric of Puerto Rico, Inc. Ave. 65 De Infanteria, KM 9.7 Victoria Industrial Park Carolina, Puerto Rico 00630 (809) 769-4320
IN CANADA (MELCA)	Matsushita Electric of Canada Limited 5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 (416) 624-5010

5. There are special components used in the microwave oven which are important for safety. These parts are shaded on the schematic diagram and marked with a ⚠ on the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent microwave leakage, shock, fire, or other hazards. Do not modify the original design.

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(A) Do not operate or allow the oven to be operated with the door open.

(B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
   (1) Interlock operation
   (2) Proper door closing
   (3) Seal and sealing surfaces (arcing, wear, and other damage)
   (4) Damage to or loosening of hinges and latches
   (5) Evidence of dropping or abuse

(C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.

(D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

(E) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

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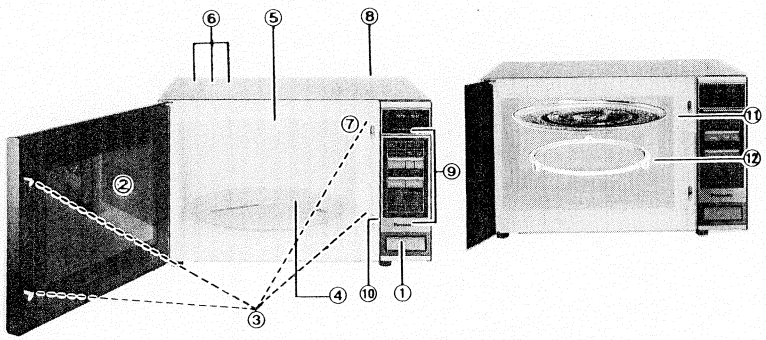
OPERATING INSTRUCTIONS

This service manual covers technical description and parts list of models NE-7865, NE-7865C, NE-7860, NE-7860C and NE-7845.
Refer to parts list for the differences of applicable parts. Models NE-7865/NE-7865C and NE-7845 are identical except for color of door and control panel layout.
Models NE-7865/NE-7865C and NE-7860/NE-7860C are also identical except NE-7865/NE-7865C have temperature probe cooking feature while NE-7860/NE-7860C do not. Also NE-7860/NE-7860C have Auto Weight Cook and Auto Weight Frozen Cook feature while NE-7865/NE-7865C do not.
Reference to unique operating features of applicable model will be refered to in this service manual.

Feature Diagram

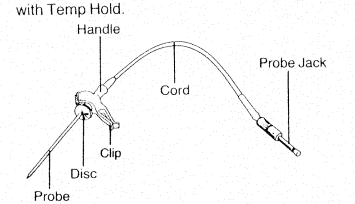


① **Door Release Button**
Push button to open door.

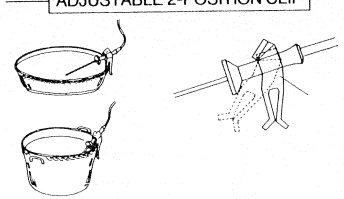
② **Oven Window**

③ **Door Safety Lock System**
Before any cooking function can begin, oven door must be securely shut.

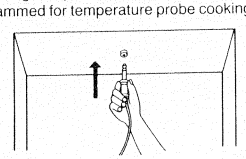
④ **Temperature Probe**
Must be used for all temperature probe cooking and with Temp Hold.



ADJUSTABLE 2-POSITION CLIP



⑤ **Temperature Probe Ceiling Receptacle**
The temperature probe must be securely inserted into ceiling receptacle, before oven can be programmed for temperature probe cooking.



⑥ **Oven Air Vents**
Never block air vents during cooking.

⑦ **Oven Light**
Will turn on whenever the door is opened or during cooking.

⑧ **Oven Light Cover**
Allows easy access to replace oven light.
(See page 25)

⑨ **Control Panel**
See page 9.

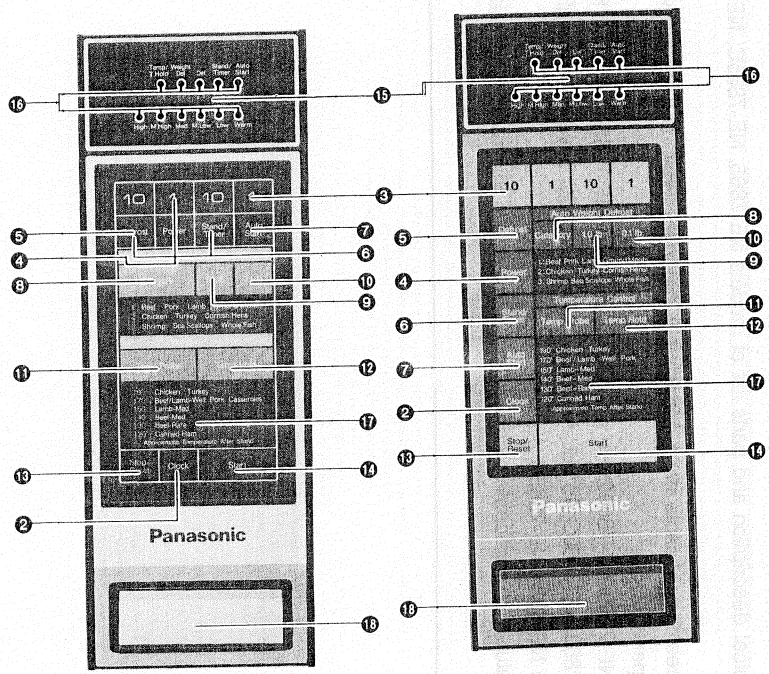
⑩ **Name Plate**
Contains model and serial number of your oven.

⑪ **Glass Tray**
Must be placed in the oven before cooking.

⑫ **Roller Ring**
Must be placed in the oven before cooking.

Control Panel

⓫ **Controls with Auto Count-Up Feature**



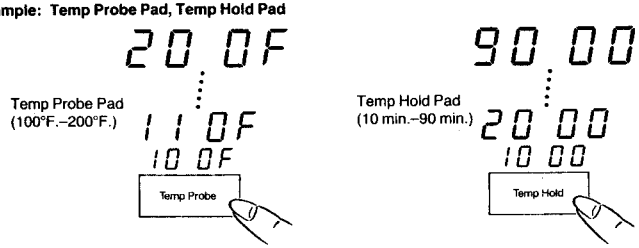
❷ **Clock Pad**
❸ **Time Pads**
❹ **Power Pad**
❺ **Cyclic Defrost Pad**
❻ **Stand/Timer Pad**
❼ **Auto Start Pad**
❽ **Auto Weight Defrost Category Pad**
❾ **1.0 Pound Pad**
❿ **0.1 Pound Pad**

⓫ **Temp Probe Pad**
⓬ **Temp Hold Pad**
⓭ **Stop/Reset Pad**
⓮ **Start Pad**
⓯ **Display Window**
⓰ **Indicator Lights**
⓱ **Cooking Guide**
⓲ **Door Release Button**

For NE-7865, NE-7865C, NE-7845

Controls

❶ Auto Count Up:
The Time, Power, Weight Defrost Category, 1.0 LB., 0.1 LB., Temp Probe and Temp Hold Pads are all equipped with the Auto Count Up feature. By holding your finger on the pad, the readout in the display window will count up.
After reaching the maximum function, the display will return to the starting point and continue to count up. To stop the readout simply remove your finger from the pad.
Note: When programming the oven, hold your finger firmly in the center of the pad.
Example: Temp Probe Pad, Temp Hold Pad



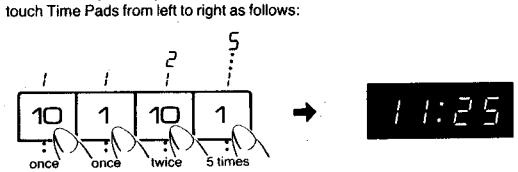
❷ Clock Pad:
When oven is first plugged in, the colon in the display window will blink.

Clock

To set clock

Step 1. Enter time of day by pressing appropriate Time Pads.
▶Time appears in display window; colon is blinking.

Example: To set 11:25 (a.m. or p.m.),
touch Time Pads from left to right as follows:

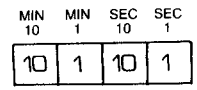


NOTES ON CLOCK SETTING

1. Clock must be set before oven will operate.
2. To reset time of day touch Clock Pad twice to clear the time. Colon will begin to blink. Enter the correct time of day by following the above procedures.
3. The clock will keep the time of day as long as unit is plugged in and electricity is supplied.

❸ Time Pads:

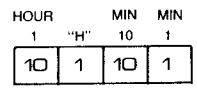
1. Basic Time Setting—All powers except LOW
The Pads serve as a 10 minute pad, 1 minute pad. 10 second pad and 1 second pad from the left, and can be programmed up to 99 minutes 99 seconds.



Example 1: To set 13 minutes 45 seconds
Touch;
10 MIN Pad: once
1 MIN Pad: 3 times
10 SEC Pad: 4 times
1 SEC Pad: 5 times

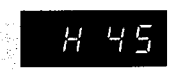
Example 2: To set 30 seconds
Touch;
10 SEC Pad: 3 times

2. LOW power
The Pads serve as a 1 hour pad, an inoperable pad, 10 minute pad and 1 minute pad from the left, and can be programmed up to 9 hours 99 minutes.



Example 1: To set 2 hours 25 minutes
Touch;
1 HOUR Pad: twice
10 MIN Pad: twice
1 MIN Pad: 5 times

Example 2: To set 45 minutes
Touch;
10 MIN Pad: 4 times
1 MIN Pad: 5 times



Note: When LOW is programmed for 1 hour or longer, the time in the display window counts down minute by minute. When less than 59 minutes (59 00) remain, the time counts down second by second.

❹ Power Pad:
Automatically counts down from High to Warm. The following is the approximate wattage for each power level.

Power

HIGH power	(700 watts/Full power)	M. LOW power	(360 watts/50% power)
M. HIGH power	(650 watts/90% power)	LOW power	(200 watts/30% power)
MEDIUM power	(490 watts/70% power)	WARM power	(70 watts/10% power)

❺ Cyclic Defrost Pad:
When DEFROST is selected, the automatic cycle divides the defrosting time into 8 periods which alternate between defrost and stand. The wattage of DEFROST power is approximate 245 watts/35% power.

Defrost

Note: When oven is operating at DEFROST power, Defrost indicator light blinks. The light remains on, but does not blink during built-in stand time.

⑥ Stand/Timer Pad:
This features allows you to program a Stand Time after cooking is complete. This pad can also be used to program the oven as a minute timer.

Stand/ Timer

⑦ Auto Start Pad:
Allows you to program the time of day you want cooking to start.

Auto Start

⑧ Auto Weight Defrost Category Pad:
This feature allows you to defrost meat poultry or seafood by weight. Choose a defrosting category and program the weight of the food. Weight must be programmed in pounds and tenths of a pound. For further information on Auto Weight Defrost refer to the Introduction in the Microwave Cookbook.
Press this pad to select the appropriate defrosting category 1 through 3. Listed below are the recommended foods and maximum weight limits for each category.

Category

Category	Food	Maximum Weight
1	Ground meats, roasts, ribs stew meat, chops steaks, frankfurters	8 lb.
2	Whole or split cornish hens, Whole or cut-up chicken, Whole Turkey, Turkey breast	16 lb.
3	Shrimp (medium), Sea Scallops, Whole Fish	3 lb.

Note: The shape and size of the meat will determine the maximum weight the oven can accommodate.

⑨ 1.0 LB:
Press this pad to program the weight of your food by whole pounds.

1.0 lb

⑩ 0.1 LB:
Press this pad to program with weight of your food by tenths of a pound. To convert ounces into tenths of a pound, see conversion chart in the Introduction of the Microwave Cookbook.

0.1 lb

⑪ Temp Probe Pad:
Press this pad to select the internal cooking temperature of food. This pad counts up in 10°F increments from 100°F to 200°F. Touching the Temp Probe Pad during cooking shows the preprogrammed temperature in the display window.

Temp Probe

⑫ Temp Hold Pad:
Keeps food at serving temperature after temperature probe cooking. The Temp Hold Pad counts up in 10 minute increments from 10 minutes to 90 minutes (1 hour 30 minutes).

Temp Hold

⑬ Stop/Reset Pad:
Before cooking: One tap clears your instructions.
During cooking: One tap temporarily stops the cooking process. Another tap cancels all your instructions and time of day appears in display window.

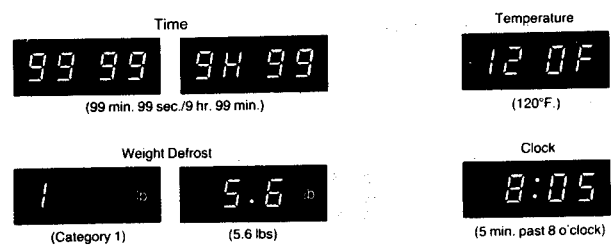
Stop/ Reset

⑭ Start Pad:
One tap allows oven to begin functioning. If door is opened or Stop/Reset Pad is tapped once during oven operation, Start Pad must again be touched to restart oven.

Start

⑮ Display Window:
Displays time of day before or after cooking, time or temperature during cooking and weight defrost category and weight.

Digital Readout Display:



⑯ Indicator Lights:
An indicator light will turn on when a specific power level and/or the following functions are selected: Temp Probe/Temp Hold, Auto Weight Defrost, Cyclic Defrost, Auto Start and Stand/Timer.

⑰ Cooking Guide:
Easy reference for food temperature, and Auto Weight Defrost.

Other Functions:

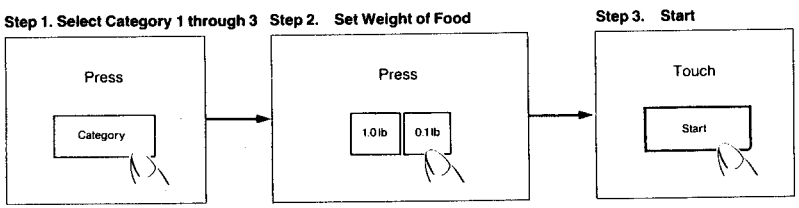
Opening Door
Opening the door during cooking will stop the cooking process without canceling the program. Cooking resumes as soon as the door is closed and Start Pad is touched. The oven light will stay on or turn on whenever the door is opened.

Beep Sound:
When a pad is touched correctly a beep will be heard. If a pad is touched and no beep is heard, the unit has not or cannot accept the instruction. The oven will beep twice between programmed stages. At the end of any complete program, the oven will beep 5 times.

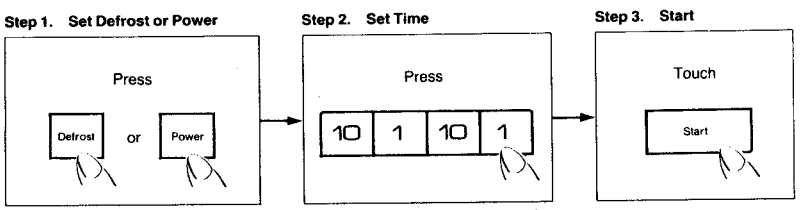
Operation Procedure

Basic Operation of Your Oven

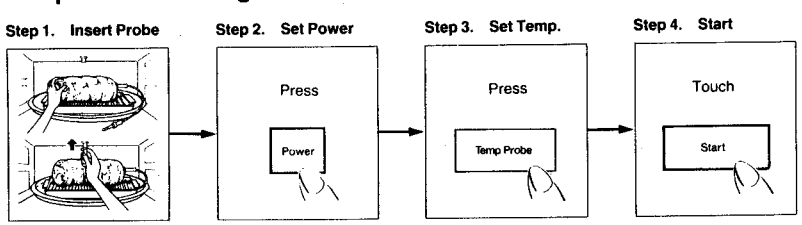
Auto Weight Defrost



Time Cooking



Temperature Cooking



Auto Weight Defrost

1. Select Category 1 through 3.
2. Set the weight of your food.
3. Touch Start Pad.

Time Cooking:

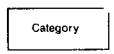
One Stage Cooking	Two Stage Cooking	Three Stage Cooking
1. Set Defrost or Power.	1. Set Defrost or first Power.	1. Set Defrost or first Power.
2. Set Time.	2. Set first Time.	2. Set first Time.
3. Touch Start Pad.	3. Set second Power.	3. Set second Power.
	4. Set second Time.	4. Set second Time.
	5. Touch Start Pad.	5. Set third Power.
		6. Set third Time.
		7. Touch Start Pad.

Temperature Cooking:

One Stage Cooking	Two Stage Cooking	Three Stage Cooking
1. Insert Probe.	1. Insert Probe.	1. Insert Probe.
2. Set Power.	2. Set first Power.	2. Set first Power.
3. Set Temp.	3. Set first Temp.	3. Set first Temp.
4. Touch Start Pad.	4. Set second Power.	4. Set second Power.
	5. Set second Temp.	5. Set second Temp.
	6. Touch Start Pad.	6. Set third Power.
		7. Set third Temp.
		8. Touch Start Pad.

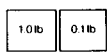
Auto Weight Defrost

Step 1
Press Auto Weight Defrost Category Pad to select Defrost Category 1 through 3.



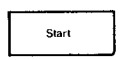
►Clock time disappears. The selected category number appears in the display window. Auto Weight Defrost indicator light turns on.

Step 2
Set the weight of your meat by pressing 1.0 (lb) Pad and/or 0.1 (lb) Pad.



►Category number disappears and the weight selected appears in the display window.

Step 3
Touch Start Pad.



After Oven Starts:

►MICROWAVE DEFROSTING BEGINS. Turntable rotates. Oven light turns on. Auto Weight Defrost indicator light begins to blink. Weight in display disappears. Defrosting time appears and counts down second by second.
►WHEN DEFROSTING IS COMPLETED, oven beeps five times and shuts off. Turntable stops. The indicator light and oven light turn off. Time of day appears in display window.

NOTES ON AUTO WEIGHT DEFROST:

1. Categories for Weight Defrost are:

Category	Food	Maximum Weight
1	Ground meats, roasts, ribs stew meat, chops steaks, frankfurters	8 lb.
2	Whole or split cornish hens, Whole or cut-up chicken, Whole Turkey, Turkey breast	16 lb.
3	Shrimp (medium), Sea Scallops, Whole Fish	3 lb.

2. Stand time or power and time cooking may be programmed after Auto Weight Defrost.
3. Temp Probe cooking may be used to cook meat after Auto Weight Defrost cycle is completed. Temp probe cooking cannot be programmed with Auto Weight Defrost.
4. Auto Start can not be programmed before Auto Weight Defrost.
5. For further information on Auto Weight Defrost refer to introduction in Microwave Cookbook.

Note: The shape and size of the meat will determine the maximum weight the oven can accommodate.

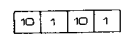
Time Cooking

Cyclic Defrost

Step 1
Touch Defrost Pad.

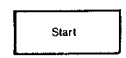
►Clock time disappears. Defrost indicator light turns on.

Step 2
Set defrost time by pressing Time Select Pads.



►Defrost time appears in display window in minutes and seconds.

Step 3
Touch Start Pad.



After Oven Starts:

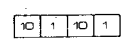
►MICROWAVE DEFROSTING BEGINS. Turntable rotates. Oven light turns on. Defrost indicator light begins to alternately blink and glow. Defrosting time counts down second by second.
►WHEN DEFROSTING IS COMPLETED, oven beeps five times and shuts off. Turntable stops rotating. Defrost indicator light and oven light turn off. Time of day appears in display window.

One Stage Cooking

Step 1
Select cooking power by pressing Power Pad.

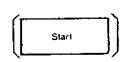
►Clock time disappears. Selected power indicator light turns on.

Step 2
Set cooking time by pressing Time Select Pads.



►Cooking time appears in display window in minutes and seconds.

[Step 3 Touch Start Pad.]



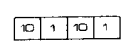
OR

Two Stage Cooking

Step 3
Before touching Start Pad, select second cooking power by pressing Power Pad.

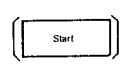
►Previously selected time and power indicator light disappear from display window. Second stage power indicator light turns on.

Step 4
Set second stage cooking time by pressing Time Pads.



►Second stage cooking time appears in display window.

[Step 5 Touch Start Pad.]



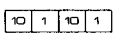
OR

Three Stage Cooking

Step 5
Before touching Start Pad, select third stage cooking power by pressing Power Pad.

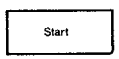
▶Previously selected time and power indicator light disappear from display window. Third stage power indicator light turns on.

Step 6
Set third stage cooking time by pressing Time Select Pads.



▶Third stage cooking time appears in display window.

Step 7
Touch Start Pad.



After Oven Starts:

▶MICROWAVE COOKING BEGINS. Turntable rotates. Oven light turns on. Third stage cooking time disappears and first stage cooking time reappears in the display window and begins to count down. First stage power indicator light turns on and starts to blink. Second stage power indicator light turns on. Third stage power indicator light remains on.

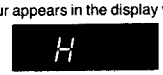
▶WHEN THE FIRST STAGE COOKING TIME HAS ELAPSED, a beep sounds twice. Second stage cooking time reappears in the display window and begins to count down. First stage power indicator light turns off. Second stage power indicator light starts to blink. Third stage power indicator light remains on.

▶WHEN THE SECOND STAGE COOKING TIME HAS ELAPSED, a beep sounds twice. Third stage cooking time reappears in the display window and begins to count down.
Second stage power indicator light turns off. Third stage power indicator light starts to blink.

▶WHEN THE THIRD STAGE COOKING TIME HAS ELAPSED, five beeps are heard and oven turns off. Third stage power indicator light turns off. Oven light turns off and turntable stops rotating. Time of day reappears in the display window.

NOTES ON TIME AND POWER COOKING:

1. When LOW power is programmed "H" meaning Hour appears in the display window. Cooking time can only be programmed in hours and minutes.



2. When LOW power is programmed for 1 hour or longer, the time will count down minute by minute. When less than 59 minutes (59 00) remain, the time will count down second by second.

3. Examples of 2 and 3 stage programmed cooking are:

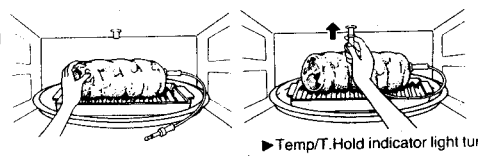
First Stage	Second Stage	Third Stage
HIGH, 8 minutes	→ Stand, 3 minutes	
HIGH, 9 minutes	→ MEDIUM-LOW, 20 minutes	
Auto Start	→ MEDIUM, 24 minutes	
HIGH, 10 minutes	→ MEDIUM, 20 minutes	→ Stand 5 minutes
Auto Start	→ HIGH, 10 minutes	→ LOW, 50 minutes

Temperature Probe Cooking

One Stage Cooking:

Step 1
Insert temperature probe horizontally into center of food and place in oven. Connect probe jack to oven ceiling receptacle.

Shut oven door.

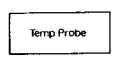


▶Temp/T.Hold indicator light turns on.

Step 2
Select cooking power by pressing Power Pad.

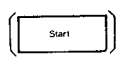
▶Clock time disappears. Selected power indicator light turns on.

Step 3
Select temperature of food by pressing Temp Probe Pad.



▶Selected temperature appears in display window.

[Step 4 Touch Start Pad.]



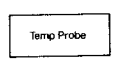
OR

Two Stage Cooking:

Step 4
Before touching Start Pad, select second cooking power by pressing Power Pad.

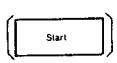
▶Previously selected power indicator light and temperature disappear from display window. Second stage power indicator light turns on.

Step 5
Select second stage temperature of food by pressing Temp Probe Pad.



▶Selected temperature appears in display window.

[Step 6 Touch Start Pad.]



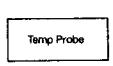
OR

Three Stage Cooking:

Step 6
Before touching Start Pad, select third stage cooking power by pressing Power Pad.

▶Previously selected power indicator light and temperature disappear from display window. Third stage power indicator light turns on.

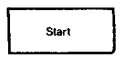
Step 7
Select third stage temperature of food by pressing Temp Probe Pad.



▶Selected temperature appears in display window.

Step 8

Touch Start Pad.

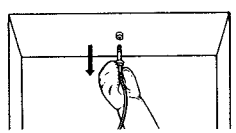


After Oven Starts:

- ▶MICROWAVE COOKING BEGINS. Turntable rotates. Oven light turns on. First stage power indicator light begins to blink. Current temperature of food is displayed in rising 5°F increments starting at 100°F. If starting temperature is lower than 95°F, "L90F" (meaning lower than 100°F) will be displayed until food reaches 100°F. First stage power indicator light turns on and starts to blink. Second stage power indicator light turns on. Third stage power indicator light remains on.
- ▶WHEN FIRST STAGE COOKING ENDS, oven beeps twice; first stage power indicator light turns off while second stage light begins to blink. Third stage power indicator light remains on. Current temperature continues to be displayed.
- ▶WHEN SECOND STAGE COOKING ENDS, oven again beeps twice; second stage power indicator light turns off while third stage light begins to blink. Current temperature continues to be displayed.
- ▶WHEN THIRD STAGE COOKING ENDS, oven beeps five times and shuts off automatically; power indicator light and oven light turn off. Turntable stops rotating. Time of day appears in display window.

Step 9

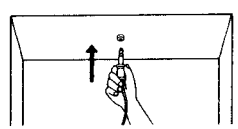
Remove temperature probe from oven ceiling receptacle.



▶Temp/T. Hold indicator light turns off.

NOTES ON TEMPERATURE PROBE COOKING:

1. To program oven for temperature probe cooking, probe must be connected to oven ceiling receptacle.



2. Examples of two and three stage temperature probe cooking are:

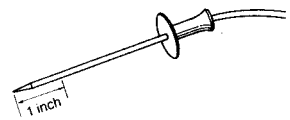
First Stage	Second Stage	Third Stage
MEDIUM, 100°F	→ LOW, 130°F	
Auto Start	→ MEDIUM, 140°F	
MEDIUM-HIGH, 160°F	→ Stand, 5 minutes	
MEDIUM, 140°F	→ Temp Hold, 20 minutes	
Auto Start	→ MEDIUM, 130°F	→ Stand 15 minutes
MEDIUM-HIGH, 100°F	→ MEDIUM-LOW,140°F	→ Temp Hold, 30 minutes

A If the programmed second stage temperature is lower than the first stage temperature (example: 160→140°F), the oven will turn off after the first stage of cooking is completed.

B If the programmed second stage temperature is lower than the first or third stage temperature (example 160°F→140°F→170°F), the oven will skip the second stage and go directly to the third stage.

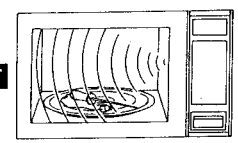
C Touching the Temp Probe Pad during looking shows the preprogrammed temperature in the display window.

3. Connection or removal of temperature probe during any cooking program or during a temporary stop in the middle of cooking will cancel remaining program. Time of day will appear in display window.
4. Connecting or removing the temperature probe will cancel any function already programmed in the oven.
5. Probe should be inserted at least one inch into center of food to insure accurate temperature reading. If probe is not inserted securely into the food, it may fall out and arcing (bluish sparks) may result. This may damage probe. For information on how to properly insert temperature probe see Introduction Section of the Microwave Cookbook.



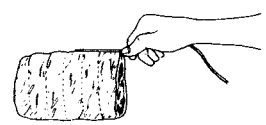
6. Touching the Temp Probe Pad during cooking shows the preprogrammed temperature in the display window.
7. Remove probe from oven after cooking. Do not store probe inside oven cavity. Should oven be turned on accidentally, damage to probe and/or oven may result.

Do NOT

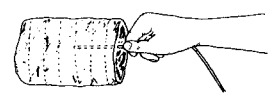


8. For most accurate results the temperature probe should not touch bone or fat. The tip of the probe should be positioned in the center of the meat. See illustration.

A Place probe on top of roast to measure distance from center to end. Position fingers on probe where roast ends.

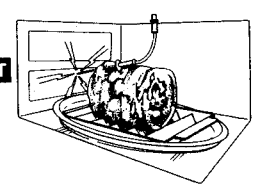


B Insert probe into meatiest portion of the roast until fingers touch meat. The tip of the probe should now be at the center of the roast.

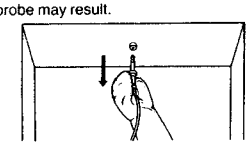


9. Do not allow temperature probe tip to touch surface of oven wall. Damage to probe and/or oven may result.

Do NOT



10. Do not use your temperature probe in other manufacturer's ovens, including other Panasonic ovens. Also do not use any other manufacturers' probes in your Panasonic Microwave Oven.
11. Do not attempt to insert probe into solidly frozen foods. Damage to probe may result.
12. Do not hit or drop probe. Damage may occur causing incorrect temperature readings and inaccurate cooking results.
13. Use hot pads when removing probe from oven ceiling receptacle. Microwave cooking causes probe to become hot to touch.



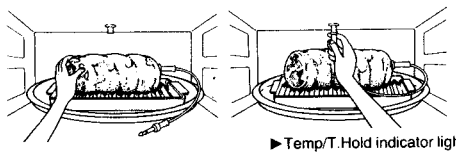
Special Controls

Temp Hold

The oven will keep food warm when Temperature Hold is used in conjunction with any temperature probe cooking operation by holding final temperature of food you select.

Step 1

Insert temperature probe horizontally into center of food and place in oven. Connect probe jack to oven ceiling receptacle.



Shut oven door.

▶Temp/T.Hold indicator light turns on.

Step 2

Program desired temperature probe cooking according to directions already given in this manual.

Desired Temp Probe Cooking Program

▶Selected temperature probe cooking program and indicator light appear in display window.

Step 3

After having selected desired temperature probe cooking program, set Temp Hold time by pressing Temp Hold Pad.

Temp Hold

▶Previously selected program and indicator light except for Temp/T.Hold indicator light disappear from display window. Selected time appears in display window in 10 minute increments, from 10 to 90 minutes.

Step 4

Touch Start Pad.

Start

After Oven Starts:

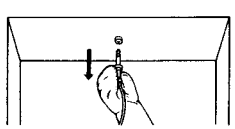
▶MICROWAVE COOKING BEGINS. Turntable rotates. Oven light turns on. Appropriate indicator light begins to blink while Temp/T.Hold indicator light stays on.

▶WHEN OVEN COOKS TO PROGRAMMED TEMPERATURE, it beeps twice and selected Temp Hold time appears in minutes and seconds in display window.
Previous power indicator light turns off. Temp/T.Hold indicator light begins to blink and time counts down second by second.

▶AT THE END OF HOLDING TIME oven beeps five times and shuts off automatically. Turntable stops and oven light turns off. Temp/T.Hold indicator light stops blinking
Time of day appears in display window.

Step 5

Remove temperature probe from oven ceiling receptacle.



▶Temp/T.Hold indicator light turns off.

NOTES ON TEMP HOLD:

1. Maximum of two stage cooking can be programmed before Temp Hold.
   Temp Hold must be the final stage programmed.
2. This oven can be programmed to hold the temperature of the food at a lower temperature than the actual cooking temperature.

To program the oven:

Step 1. Set desired Temperature cooking program.
Step 2. Set a microwave power level and lower probe temperature.
(As the temperature of the food drops to the second stage temperature by natural cooling, there is no microwave activity during this second stage.)
Step 3. Set Temp Hold time.
Step 4. Touch Start Pad. Some examples are:
160°F (HIGH)—140°F (LOW)—Temp Hold, 30 min.
180°F (MEDIUM)—140°F (M. HIGH)—Temp Hold, 20 min.

Auto Start

Step 1

Touch Auto Start Pad.

Auto Start

▶Clock time disappears from display window. Auto Start indicator light turns on, and colon (:) stays on.

Step 2

Set the time of day you want the oven to begin cooking by pressing the Time Pads.

10 | 1 | 10 | 1

▶Selected start time appears in display window.

Step 3

Program desired cooking according to directions already given in this manual.

Desired Cooking Program

▶Start time, colon and Auto Start indicator light disappear. Selected program and indicator lights appear in display window.

Step 4

Touch Start Pad.

Start

After Oven Starts

▶NO COOKING ACTIVITY BEGINS. Turntable does not rotate. Oven light does not turn on. Selected program disappears. Indicator lights stay on. Current day time appears, Auto Start indicator light turns on and colon starts to blink.

▶WHEN SELECTED START TIME APPEARS IN THE DISPLAY WINDOW, oven beeps twice and enters into previously selected cooking function. Oven light turns on and turntable begins to rotate. Auto Start indicator light and colon turn off while next stage indicator lights begin to blink.

▶WHEN COOKING IS COMPLETED, oven beeps five times and shuts off.
Turntable stops rotating, oven light and indicator lights turn off, and time of day appears in display window.

NOTES ON AUTO START:

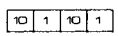
1. With the Auto Start feature, the oven may be programmed to start cooking up to 11 hours and 59 minutes before cooking starts.
2. Before cooking, to recall selected start time, press Auto Start Pad. Start time will appear in display window while your finger is touching the pad.
3. Only one or two stage cooking can be programmed after Auto Start.
4. Auto Start can not be programmed before Auto Weight Defrost and Cyclie Defrost.
   This is to prevent the starting temperature of the food from rising before defrosting or cooking begins. A change in the starting temperature could cause inaccurate results.

Timer

Step 1
Touch Stand/Timer Pad.

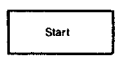
►Clock time disappears from display window. Stand/Timer indicator light turns on.

Step 2
Set desired amount of time by pressing Time Pads.



►Selected amount of time appears in display window. (A maximum of 99 minutes and 99 seconds may be programmed.)

Step 3
Touch Start Pad.



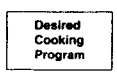
After Oven Starts:

►NO COOKING ACTIVITY BEGINS. Turntable does not rotate. Oven light does not turn on. Only the time displayed starts to count down. Stand/Timer indicator light stays on.
►WHEN PROGRAMMED TIME HAS ELAPSED, oven beeps five times. Stand/Timer indicator light turns off. Time of day appears in display window.

Note: If oven door is opened during the timer function, the time in the display window will continue to count down.

Stand Time

Step 1
Program desired cooking program according to directions already given in this manual.

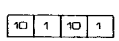


►Selected program and indicator light appear in display window.

Step 2
Touch Stand/Timer Pad.

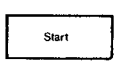
►Previously selected program and indicator lights disappear. Stand/Timer indicator light turns on.

Step 3
Set desired amount of time by pressing Time Pads.



►Stand time appears in display window. (A maximum of 99 minutes and 99 seconds may be programmed twice.)

Step 4
Touch Start Pad.



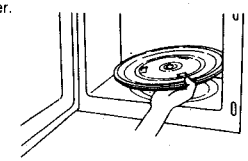
After Oven Starts:

►MICROWAVE COOKING BEGINS. Turntable rotates. Oven light turns on. Previously selected program appears in display window, and indicator light blinks. .
►WHEN MICROWAVE PROGRAM is completed, turntable stops, oven beeps twice, and standing time counts down. Stand/Timer indicator light turns on while oven light turns off.
►AT END OF STANDING TIME, oven beeps five times and shuts off. Stand/Timer indicator light turns off. Time of day appears in display window.

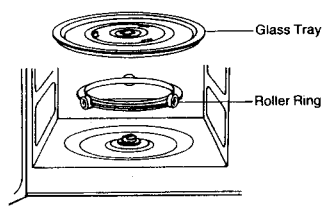
Note: If oven door is opened during the timer function, the time in the display window will continue to count down.

Care of Your Microwave Oven

1. Turn the oven off before cleaning.
2. Keep the inside of the oven clean. When food spatters or spilled liquids adhere to oven walls, wipe with a damp cloth. Mild detergent may be used if the oven gets very dirty. The use of harsh detergent or abrasives is not recommended.
3. The outside oven surface should be cleaned with soap and water, rinsed and dried with a soft cloth. To prevent damage to the operating parts inside the oven, water should not be allowed to seep into the ventilation openings.
4. If the Control Panel becomes wet, clean with a soft, dry cloth. Do not use harsh detergents or abrasives on Control Panel.
   When cleaning the Control Panel, leave oven door open to prevent unit from accidentally turning on. After cleaning touch Stop/Reset Pad to clear display window.
5. If steam accumulates inside or around the outside of the oven door, wipe with a soft cloth. This may occur when the microwave oven is operated under high humidity conditions and in no way indicates malfunction of the unit.
6. It is occasionally necessary to remove the glass tray for cleaning. Wash the tray in warm sudsy water or in a dishwasher.



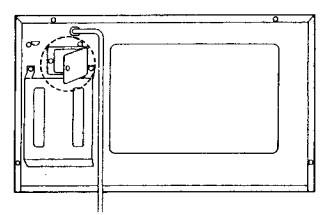
7. The roller ring and cavity floor should be cleaned regularly to avoid excessive noise.
   Simply wipe the bottom surface of the oven with mild detergent water or window cleaner and dry. The roller ring may be washed in mild sudsy water or dish washer. Cooking vapors collect during repeated use but in no way affects the bottom surface or roller ring wheels.
   When removing the roller ring from cavity floor for cleaning, be sure to replace in the proper position.



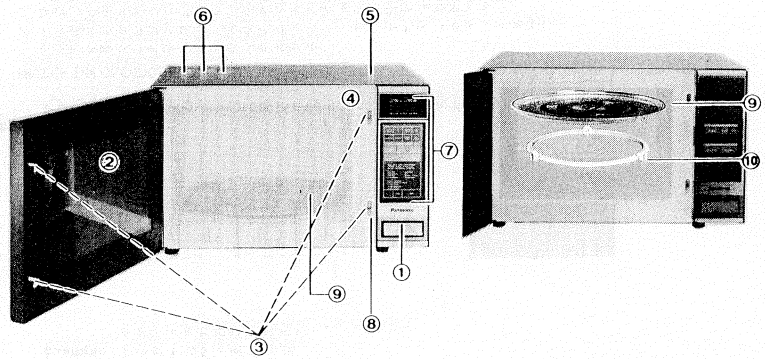
Replacement of Oven Light

When it becomes necessary to replace the oven light, you can replace it yourself. Please follow the directions below carefully.

Step 1. Turn off the oven and unplug it.
Step 2. Remove the screw from the oven light cover which is located on the back of the cabinet.
Step 3. Replace the oven light with only 115–125 V, 20 W, bulb. If this bulb is not available locally, contact the nearest authorized Panasonic Service Center.
Step 4. Replace the oven light cover.



Feature Diagram



① **Door Release Button**
Push button to open door.

② **Oven Window**

③ **Door Safety Lock System**
Before any cooking function can begin, oven door must be securely shut.

④ **Oven Light**
Will turn on whenever the door is opened or during cooking.

⑤ **Oven Light Cover**
Allows easy access to replace oven light.
(See page 26)

⑥ **Oven Air Vents**
Never block air vents during cooking.

⑦ **Control Panel**
See page 9.

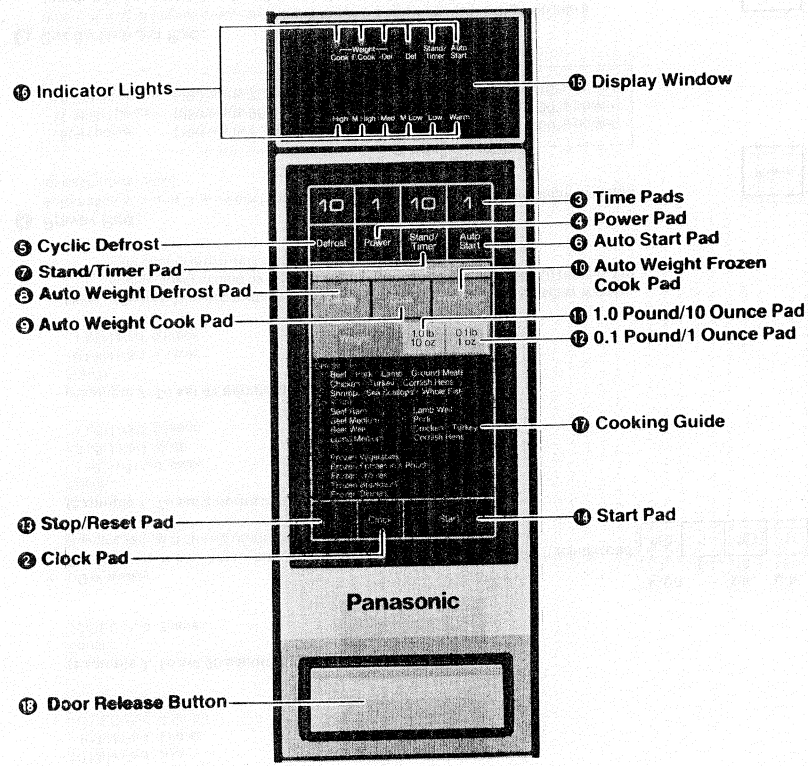
⑧ **Name Plate**
Contains model and serial number of your oven.

⑨ **Glass Tray**
Must be placed in the oven before cooking.

⑩ **Roller Ring**
Must be placed in the oven before cooking.

Control Panel

● **Controls with Auto Count-Up Feature**



For NE-7860, NE-7860C

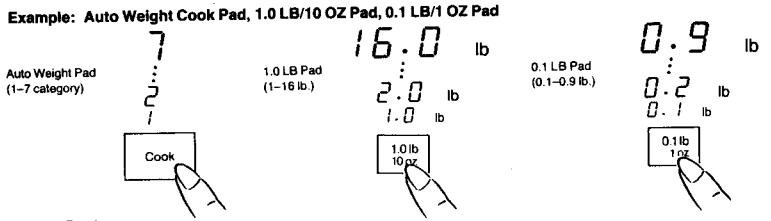
NE-7865, NE-7865C
NE-7860, NE-7860C
NE-7845

Controls

❶ Auto Count Up:

The Time, Power, Weight Defrost Category, Weight Cook Category, Frozen Weight Cook Category, 1.0 LB/10 OZ., and 0.1 LB/1 OZ. pads are all equipped with the Auto Count Up feature. By holding your finger on the pad, the readout in the display window will count up. After reaching the maximum function, the display will return to the starting point and continue to count up. To stop the readout simply remove your finger from the pad.

Example: Auto Weight Cook Pad, 1.0 LB/10 OZ Pad, 0.1 LB/1 OZ Pad



❷ Clock Pad:

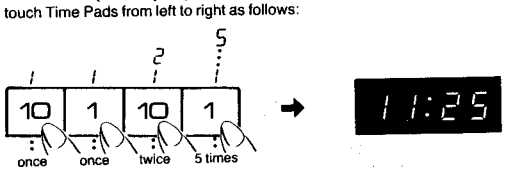
When oven is first plugged in, the colon in the display window will blink.

Clock

To set clock

Step 1. Enter time of day by pressing appropriate Time Pads.
▶Time appears in display window; colon is blinking.

Example: To set 11:25 (a.m. or p.m.),
touch Time Pads from left to right as follows:



Step 2. Touch Clock Pad.
▶Colon stops blinking; time of day is entered and locked into display.

NOTES ON CLOCK SETTING

1. Clock must be set before oven will operate.
2. To reset time of day touch Clock Pad twice to clear the time. Colon will begin to blink. Enter the correct time of day by following the above procedures.
3. The clock will keep the time of day as long as oven is plugged in and electricity is supplied.

❸ Time Pads:

1. Basic Time Setting—All powers except LOW

The Pads serve as a 10 minute pad, 1 minute pad, 10 second pad and 1 second pad from the left, and can be programmed up to 99 minutes and 99 seconds.

MIN 10	MIN 1	SEC 10	SEC 1
10	1	10	1

(Example 1: To set 13 minutes 45 seconds)
Touch;
10 MIN Pad: once
1 MIN Pad: 3 times
10 SEC Pad: 4 times
1 SEC Pad: 5 times

(Example 2: To set 30 seconds)
Touch;
10 SEC Pad: 3 times

2. LOW power

The Pads serve as a 1 hour pad, an inoperable pad, 10 minute pad and 1 minute pad from the left, and can be programmed up to 9 hours and 99 minutes.

HOUR 1	"H"	MIN 10	MIN 1
10	1	10	1

(Example 1: To set 2 hours 25 minutes)
Touch;
1 HOUR Pad: twice
10 MIN Pad: twice
1 MIN Pad: 5 times

(Example 2: To set 45 minutes)
Touch;
10 MIN Pad: 4 times
1 MIN Pad: 5 times

Note: When LOW is programmed for 1 hour or longer, the time in the display window counts down minute by minute. When less than 59 minutes (59 00) remain, the time counts down second by second.

❹ Power Pad:

Automatically counts down from High to Warm. The following is the approximate wattage for each power level.

Power

HIGH power	(700 watts/Full power)	M. LOW power	(360 watts/50% power)
M. HIGH power	(650 watts/90% power)	LOW power	(200 watts/30% power)
MEDIUM power	(490 watts/70% power)	WARM power	(70 watts/10% power)

❺ Cyclic Defrost Pad:

When DEFROST is selected, the automatic cycle divides the defrosting time into 8 periods which alternate between defrost and stand. DEFROST power is approximate 245 watts/35% power.

Defrost

Note: When oven is operating at DEFROST power, Cyclic Defrost indicator light blinks. The light remains on, but does not blink during built-in stand time.

❻ Auto Start Pad:

Allows you to program the time of day you want cooking to start.

Auto Start

❼ Stand/Timer Pad:

This feature allows you to program a Stand Time after cooking is complete. This pad can also be used to program the oven as a minute timer.

Stand/ Timer

⑧ Auto Weight Defrost Pad:

This feature allows you to defrost meat, poultry or seafood by weight. Choose a defrosting category and program the weight of the food. Weight must be programmed in pounds and tenths of a pound. For further information on Auto Weight Defrost refer to Introduction in the Microwave Cookbook.

Press this pad to select the appropriate defrosting category 1 through 3. Listed below are the recommended foods and maximum weight limits for each category.

Defrost
(Auto Weight)

Category	Food	Maximum Weight
1	Ground meats, roasts, ribs stew meat, chops, steaks, frankfurters	8 lb.
2	Whole or split cornish hens, Whole or cut-up chicken, Whole Turkey, Turkey breast	16 lb.
3	Shrimp (medium), Sea Scallops, Whole Fish	3 lb.

Note: The shape and size of the meat will determine the maximum weight the oven can accommodate.

⑨ Auto Weight Cook Pad:

This feature allows you to cook meat or poultry by weight. Choose a cook category and program the weight of the food. Weight must be programmed in pounds and tenths of a pound. For further information on Auto Weight Cook, refer to Introduction in Microwave Cookbook.

Cook

Press this pad to select the appropriate cook category 1 through 7. Listed below are the recommended foods and maximum weight limits for each category.

Category	Food	Maximum Weight
1	Beef Rare	8 lb.
2	Beef Medium	8 lb.
3	Beef Well	8 lb.
4	Lamb Medium	6 lb.
5	Lamb Well	6 lb.
6	Pork	6 lb.
7	Whole or split cornish hens, Whole or cut-up chicken, Whole turkey	16 lb.

Note: The shape and size of the meat will determine the maximum weight the oven can accommodate.

⑩ Auto Weight Frozen Cook Pad:

This feature allows you to cook frozen foods by weight. Choose a frozen cook category and program the weight of the food. Weight must be programmed in ounces. For further information on Auto Weight Frozen Cook, refer to Introduction in Microwave Cookbook.

Froz - Cook

Press this pad to select the appropriate cook category 1 through 5. Listed below are the recommended foods and maximum weight limits for each category.

Category	Food	Maximum Weight
1	Frozen Vegetables	32 oz.
2	Frozen Entrees in a Pouch	16 oz.
3	Frozen Entrees	32 oz.
4	Frozen Breakfasts	16 oz.
5	Frozen Dinners	32 oz.

Note: The shape and size of the meat will determine the maximum weight the oven can accommodate.

⑪ 1.0 Pound/10 Ounce Pad:

1.0 lb 10 oz

Press this pad to program the weight of your food by whole pounds or by 10 ounces. For Weight Cook and Weight Defrost this pad is used in the pound capacity. For Weight Frozen Cook this pad is used in the 10 ounce capacity.

⑫ 0.1 Pound/1 Ounce Pad:

0.1 lb 1 oz

Press this pad to program the weight of your food by tenths of a pound or by ounces. To convert ounces into tenths of a pound, see conversion chart in the Introduction of the Microwave Cookbook. For Weight Cook and Weight Defrost this pad is used in the tenths of a pound capacity. For Weight Frozen Cook this pad is used in the single ounce capacity.

⑬ Stop/Reset Pad:

Before cooking: One tap clears your instructions.
During cooking: One tap temporarily stops the cooking process. Another tap cancels all your instructions and time of day appears in display window.

Stop/ Reset

⑭ Start Pad:

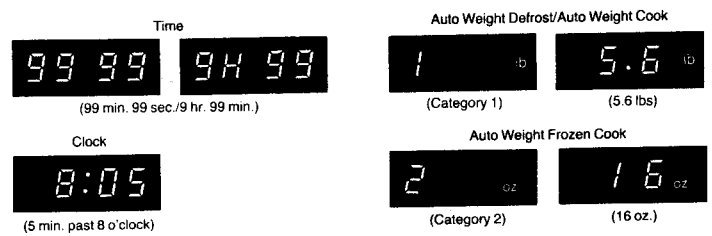
One tap allows oven to begin functioning. If door is opened or Reset/Stop Pad is tapped once during oven operation, Start Pad must again be touched to restart oven.

Start

⑮ Display Window:

Displays time of day before or after cooking, time during cooking, Weight Defrost and Weight Cook category and weight.

Digital Readout Display:



⑯ Indicator Lights:

An indicator light will turn on when a specific power level and/or the following functions are selected: Auto Weight Defrost, Auto Weight Cook, Auto Weight Frozen Cook, Cyclic Defrost, Auto Start and Stand/Timer.

⑰ Cooking Guide:

Easy reference for Auto Weight Defrost, Auto Weight Cook and Auto Weight Frozen Cook.

Opening Door:

Opening the door during cooking will stop the cooking process without canceling the program. Cooking resumes as soon as the door is closed and Start Pad is touched. The oven light will stay on or turn on whenever the door is opened.

Beep Sound:

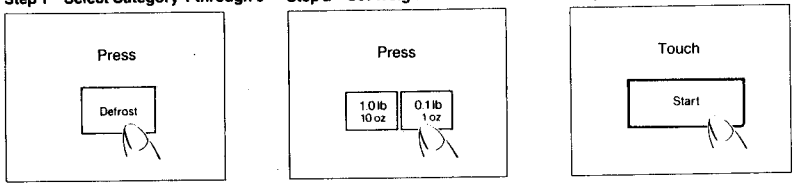
When a pad is touched correctly, a beep will be heard. If a pad is touched and no beep is heard, the unit has not or cannot accept the instruction. The oven will beep twice between programmed stages. At the end of any complete program, the oven will beep 5 times.

Operation Procedure

Basic Operation of Your Oven

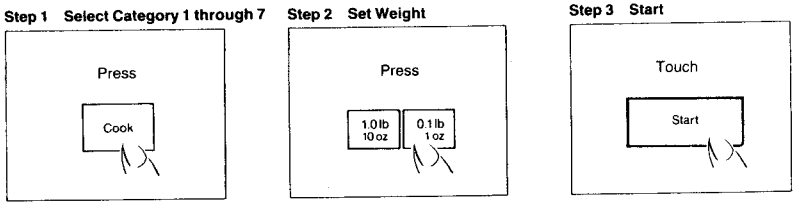
Auto Weight Defrost

Step 1 Select Category 1 through 3 **Step 2 Set Weight** **Step 3 Start**



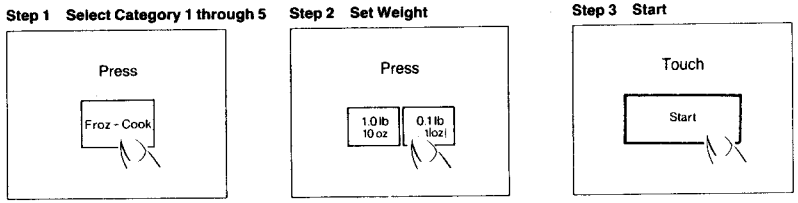
Auto Weight Cook

Step 1 Select Category 1 through 7 **Step 2 Set Weight** **Step 3 Start**



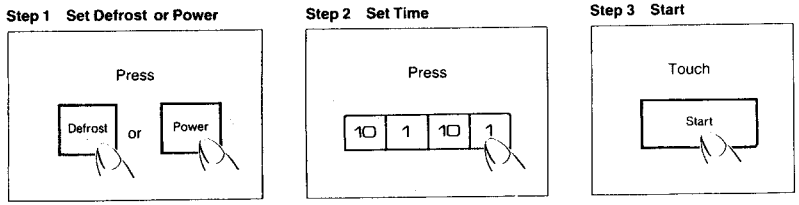
Auto Weight Frozen Cook

Step 1 Select Category 1 through 5 **Step 2 Set Weight** **Step 3 Start**



Time Cooking

Step 1 Set Defrost or Power **Step 2 Set Time** **Step 3 Start**



Auto Weight Defrost

1. Select Category 1 through 3.
2. Set the weight of your food using the pound/tenth of a pound pads.
3. Touch Start Pad.

Auto Weight Cook

1. Select Category 1 through 7.
2. Set the weight of your food using the pound/tenth of a pound pads.
3. Touch Start pad.

Auto Weight Frozen Cook

1. Select Category 1 through 5.
2. Set the weight of your food using the pound/tenth of a ounce pads.
3. Touch Start pad.

Time Cooking

One Stage Cooking	Two Stage Cooking	Three Stage Cooking
1. Set Defrost or Power.	1. Set Defrost or first Power.	1. Set Defrost or first Power.
2. Set Time.	2. Set first Time.	2. Set first Time.
3. Touch Start Pad.	3. Set second Power.	3. Set second Power.
	4. Set second Time.	4. Set second Time.
	5. Touch Start Pad.	5. Set third Power.
		6. Set third Time.
		7. Touch Start Pad.

Auto Weight Defrost

Step 1

Press Auto Weight Defrost Pad to select Defrost Category 1 through 3.

(Auto Weight)

▶Clock time disappears. The selected category number appears in the display window. Auto Weight Defrost and pounds (lb) indicator light turns on.

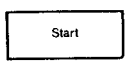
Step 2

Set the Weight of your meat in pounds and tenths of a pound by pressing 1.0 Pound/10 Ounce Pad and/or 0.1 Pound/1.0 Ounce Pad.

▶Category number disappears and the weight selected appears in display window.

Step 3

Touch Start Pad.



After Oven Starts:

▶MICROWAVE DEFROSTING BEGINS. Turntable rotates. Oven light turns on. Auto Weight Defrost and pound indicator lights begin to blink. Weight in display disappears. Defrosting time appears and counts down second by second.

▶WHEN DEFROSTING IS COMPLETED, oven beeps five times and shuts off. Turntable stops. The indicator light and oven light turn off. Time of day appears in display window.

NOTES ON AUTO WEIGHT DEFROST:

1. Categories for Auto Weight Defrost are:

Category	Food	Maximum Weight
1	Ground meats, roasts, ribs stew meat, chops, steaks, frankfurters	8 lb.
2	Whole or split cornish hens, Whole or cut-up chicken, Whole Turkey, Turkey breast	16 lb.
3	Shrimp (medium), Sea Scallops, Whole Fish	3 lb.

2. Stand time or power and time cooking may be programmed after Auto Weight Defrost.
3. Auto Start can not be programmed before Weight Defrost.
4. For further information on Auto Weight Defrost refer to introduction in Microwave Cookbook.

Note: The shape and size of the meat will determine the maximum weight the oven can accommodate.

Auto Weight Cook

Step 1

Press Auto Weight Cook Category Pad to select Cook Category 1 through 7.

▶Clock time disappears. The selected category number appears in display window. Auto Weight Cook and pounds (lb) indicator light turns on.

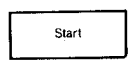
Step 2

Set the weight of your meat in pounds and tenths of a pound by pressing 1.0 Pound/10 Ounce Pad and/or 0.1 Pound/1.0 Ounce Pad.

▶Category number disappears and the weight selected appears in display window.

Step 3

Touch Start Pad.



After oven Starts:

▶MICROWAVE COOKING BEGINS. Turntable rotates. Oven light turns on. Auto Weight Defrost and pound indicator lights begin to blink. Weight in display disappears. Cooking time appears and counts down second by second.

▶WHEN COOKING IS COMPLETED, oven beeps five times and shuts off. Turntable stops rotating. The indicator light and oven light turn off. Time of day appears in display window.

NOTES ON AUTO WEIGHT COOK:

1. Categories for Auto Weight Cook are:

Category	Food	Maximum Weight
1	Beef Rare	8 lb.
2	Beef Medium	8 lb.
3	Beef Well	8 lb.
4	Lamb Medium	6 lb.
5	Lamb Well	6 lb.
6	Pork	6 lb.
7	Whole or split cornish hens, Whole or cut-up chicken, Whole turkey	16 lb.

2. Stand or a power level can be programmed after Auto Weight Cook.
   For example: Auto Weight Cook→WARM power
3. Auto Start can not be programmed before Auto Weight Cook.
4. For further information on Auto Weight Cook refer to introduction in Microwave Cookbook.

Note: The shape and size of the meat will determine the maximum weight the oven can accommodate.

Auto Weight Frozen Cook

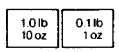
Step 1

Press Auto Weight Frozen Cook Category Pad to select Cook Category 1 through 5.

▶Clock time disappears. The selected category number appears in display window. Auto Weight Frozen Cook and ounces (oz) indicator light turns on.

Step 2

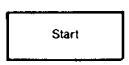
Set the weight of your frozen foods in ounces by pressing 1.0 Pound/ 10 Ounce Pad and/or 0.1 Pound/ 1.0 Ounce Pad.



▶Category number disappears and the weight selected appears in display window.

Step 3

Touch Start Pad.



After Oven Starts:

▶MICROWAVE COOKING BEGINS. Turntable rotates. Oven light turns on. Auto Weight Frozen Cook and ounce indicator light begins to blink. Weight in display disappears. Cooking time appears and counts down second by second.

▶WHEN COOKING IS COMPLETED, oven beeps five times and shuts off. Turntable stops rotating. The indicator light and oven light turn off. Time of day appears in display window.

NOTES ON AUTO WEIGHT FROZEN COOK:

1. Categories for Auto Weight Frozen Cook are:

Category	Food	Maximum Weight
1	Frozen Vegetables	32 oz.
2	Frozen Entrees in a Pouch	16 oz.
3	Frozen Entrees	32 oz.
4	Frozen Breakfasts	16 oz.
5	Frozen Dinners	32 oz.

2. Stand or a power level can be programmed after Auto Weight Frozen Cook. For example: Auto Weight Frozen Cook→WARM power.
3. Auto Start can not be programmed before Auto Weight Frozen Cook.
4. For further information on Auto Weight Frozen Cook refer to introduction in Microwave Cookbook.

Note: The shape and size of the meat will determine the maximum weight the oven can accommodate.

Time Cooking

Cyclic Defrost

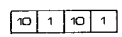
Step 1

Touch Cyclic Defrost Pad.

▶Clock time disappears. Cyclic Defrost indicator light turns on.

Step 2

Set defrost time by pressing Time Pads.



▶Defrost time appears in display window in minutes and seconds.

Step 3

Touch Start Pad.

After Oven Starts:

▶MICROWAVE DEFROSTING BEGINS. Turntable rotates. Oven light turns on. Cyclic Defrost indicator light begins to alternately blink and glow. Defrosting time counts down second by second.

▶WHEN DEFROSTING IS COMPLETED, oven beeps five times and shuts off. Turntable stops rotating. Cyclic Defrost indicator light and oven light turn off. Time of day appears in display window.

One Stage Cooking

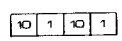
Step 1

Select cooking power by pressing Power Pad.

▶Clock time disappears. Selected power indicator light turns on.

Step 2

Set cooking time by pressing Time Pads.



▶Cooking time appears in display window in minutes and seconds.

[Step 3. Touch Start Pad.]

OR

Two Stage Cooking

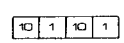
Step 3

Before touching Start Pad, select second cooking power by pressing Power Pad.

▶Previously selected time and power indicator light disappear from display window. Second stage power indicator light turns on.

Step 4

Set second stage cooking time by pressing Time Pads.



▶Second stage cooking time appears in display window.

[Step 5. Touch Start Pad.]

OR

Three Stage Cooking

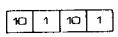
Step 5

Before touching Start Pad, select third stage cooking power by pressing Power Pad.

►Previously selected time and power indicator light disappear from display window. Third stage power indicator light turns on.

Step 6

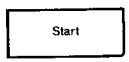
Set third stage cooking time by pressing Time Pads.



►Third stage cooking time appears in display window.

Step 7

Touch Start Pad.



After Oven Starts:

►MICROWAVE COOKING BEGINS. Turntable rotates. Third stage cooking time disappears and first stage cooking time reappears in the display window and begins to count down. First stage power indicator light turns on and starts to blink. Second stage power indicator light turns on. Third stage power indicator light remains on.

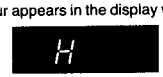
►WHEN THE FIRST STAGE COOKING TIME HAS ELAPSED, a beep sounds twice. Second stage cooking time reappears in the display window and begins to count down. First stage power indicator light turns off. Second stage power indicator light starts to blink. Third stage power indicator light remains on.

►WHEN THE SECOND STAGE COOKING TIME HAS ELAPSED, a beep sounds twice. Third stage cooking time reappears in the display window and begins to count down. Second stage power indicator light turns off. Third stage power indicator light starts to blink.

►WHEN THE THIRD STAGE COOKING TIME HAS ELAPSED, five beeps are heard and oven turns off. Third stage power indicator light turns off. Oven light turns off and turntable stops rotating. Time of day reappears in the display window.

NOTES ON TIME AND POWER COOKING:

1. When LOW power is programmed "H" meaning Hour appears in the display window. Cooking time can only be programmed in hours and minutes.



2. When LOW power is programmed for 1 hour or longer, the time will count down minute by minute. When less than 59 minutes (59 00) remain, the time will count down second by second.

3. Examples of 2 and 3 stage programmed cooking are:

First Stage	Second Stage	Third Stage
HIGH, 8 minutes	→ Stand, 3 minutes	
HIGH, 9 minutes	→ MEDIUM-LOW, 20 minutes	
Auto Start	→ MEDIUM, 24 minutes	→ WARM, 15 minutes
HIGH, 10 minutes	→ MEDIUM, 20 minutes	→ Stand, 5 minutes
Auto Start	→ HIGH, 10 minutes	→ LOW, 50 minutes

Special Controls

Auto Start

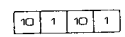
Step 1

Touch Auto Start Pad.

►Clock time disappears from display window. Auto Start indicator light turns on, and colon (:) stays on.

Step 2

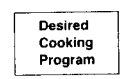
Set the time of day you want the oven to begin cooking by pressing Time Pads.



►Selected start time appears in display window.

Step 3

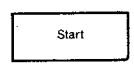
Program desired cooking according to directions already given in this manual.



►Start time with colon and Auto Start indicator light disappear. Selected program and indicator lights appear in display window.

Step 4

Touch Start Pad.



After Oven Starts:

►NO COOKING ACTIVITY BEGINS. Turntable does not rotate. Oven light does not turn on. Selected program and indicator lights disappear. Current day time appears, Auto Start indicator light turns on and colon starts to blink.

►WHEN SELECTED START TIME APPEARS IN THE DISPLAY WINDOW, oven beeps twice and enters into previously selected cooking function. Oven light turns on and turntable begins to rotate. Auto Start indicator light and colon turn off while next stage indicator lights begin to blink.

►WHEN COOKING IS COMPLETED, oven beeps five times and shuts off. Turntable stops rotating, oven light and indicator lights turn off, and time of day appears in display window.

NOTES ON AUTO START:

1. With the Auto Start feature, the oven may be programmed to start cooking up to 11 hours and 59 minutes before cooking starts.
2. Before cooking, to recall selected start time, press Auto Start Pad. Start time will appear in display window while your finger is touching the pad.
3. Only one or two stage cooking can be programmed after Auto Start.
4. Auto Start can not be programmed before Auto Weight Defrost Cyclic Defrost Auto Weight Cook or Auto Weight Frozen Cook. This is to prevent the starting temperature of the food from rising before defrosting or cooking begins. A change in the starting temperature could cause inaccurate results.

Timer

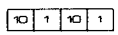
Step 1

Touch Stand/Timer Pad.

►Clock time disappears from display window. Stand/Timer indicator light turns on.

Step 2

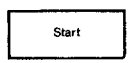
Set desired amount of time by pressing Time Pads.



►Selected amount of time appears in display window.
(A maximum of 99 minutes and 99 seconds may be programmed.)

Step 3

Touch Start Pad.



After Oven Starts:

►NO COOKING ACTIVITY BEGINS. Turntable does not rotate. Oven light does not turn on. Only the time displayed starts to count down. Stand/Timer indicator light stays on.

►WHEN PROGRAMMED TIME HAS ELAPSED, oven beeps five times. Stand/Timer indicator light turns off. Time of day appears in display window.

Note: If oven door is opened during the timer function, the time in the display window will continue to count down.

Stand Time

Step 1

Program desired cooking program according to directions already given in this manual.

►Selected program and indicator light appear in display window.

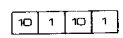
Step 2

Touch Stand/Timer Pad.

►Previously selected program and indicator lights disappear. Stand/Timer indicator light turns on.

Step 3

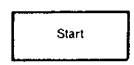
Set desired amount of time by pressing Time Pads.



►Stand time appears in display window.
(A maximum of 99 minutes and 99 seconds may be programmed twice.)

Step 4

Touch Start Pad.



After Oven Starts:

►MICROWAVE ACTIVITY BEGINS. Turntable rotates. Oven light turns on. Previously selected program appears in display window, and indicator light blinks.

►WHEN MICROWAVE PROGRAM is completed, turntable stops, oven beeps twice, and standing time counts down. Stand/Timer indicator light turns on while oven light turns off.

►AT END OF STANDING TIME, oven beeps five times and shuts off. Stand/Timer indicator light turns off. Time of day appears in display window.

SCHEMATIC DIAGRAM (NE-7865, NE-7860, NE-7845)

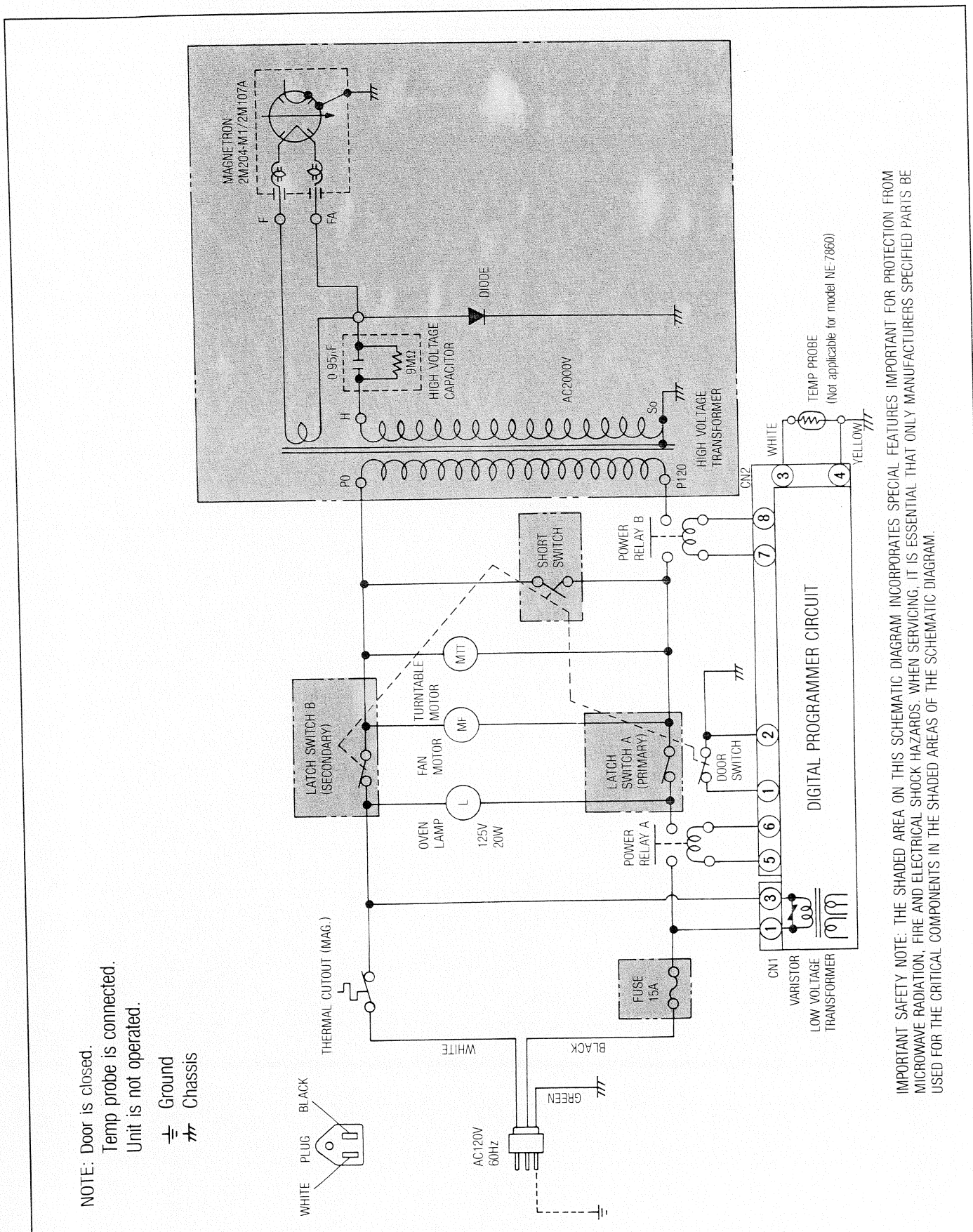


Fig. 1

SCHEMATIC DIAGRAM (NE-7865C, NE-7860C)

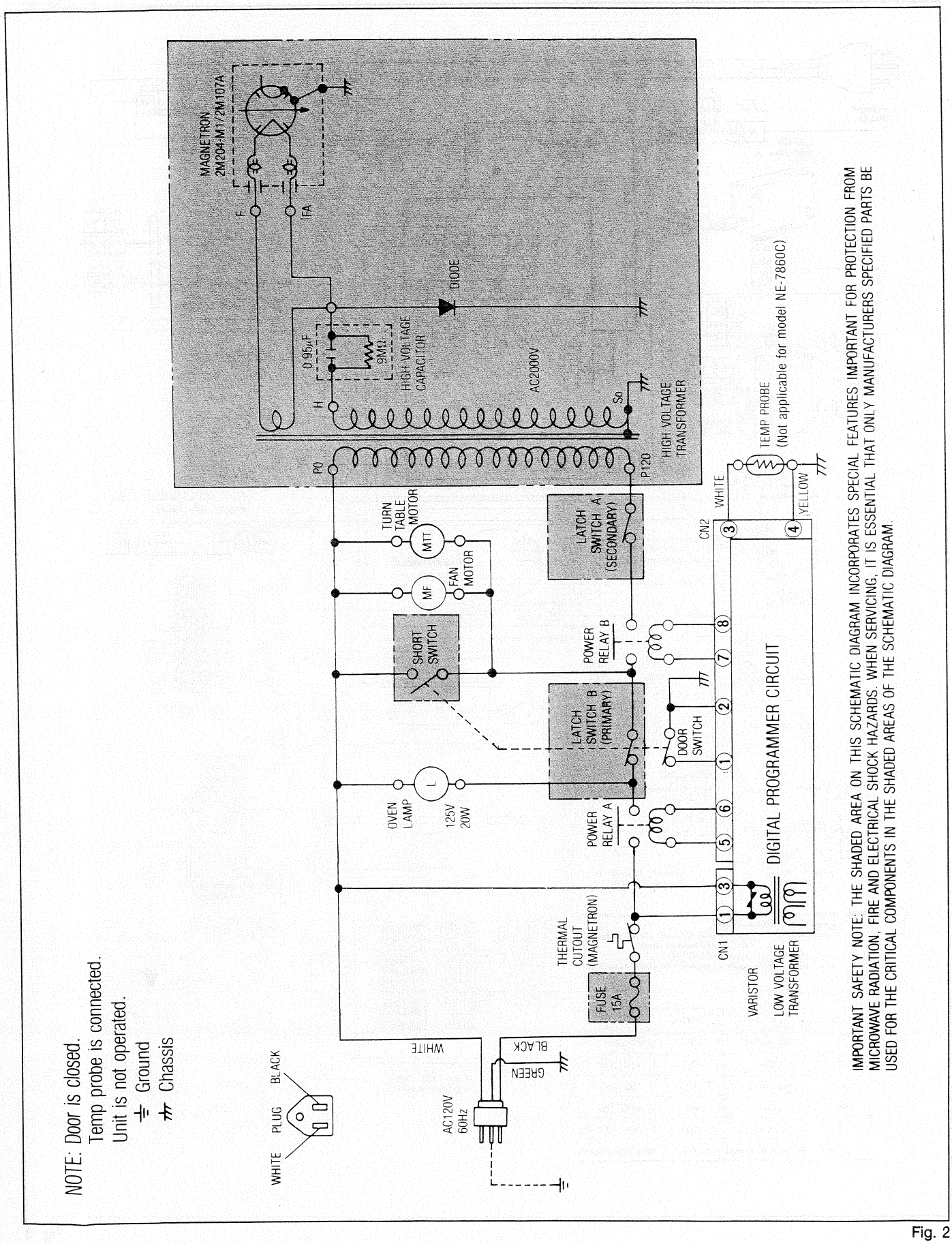
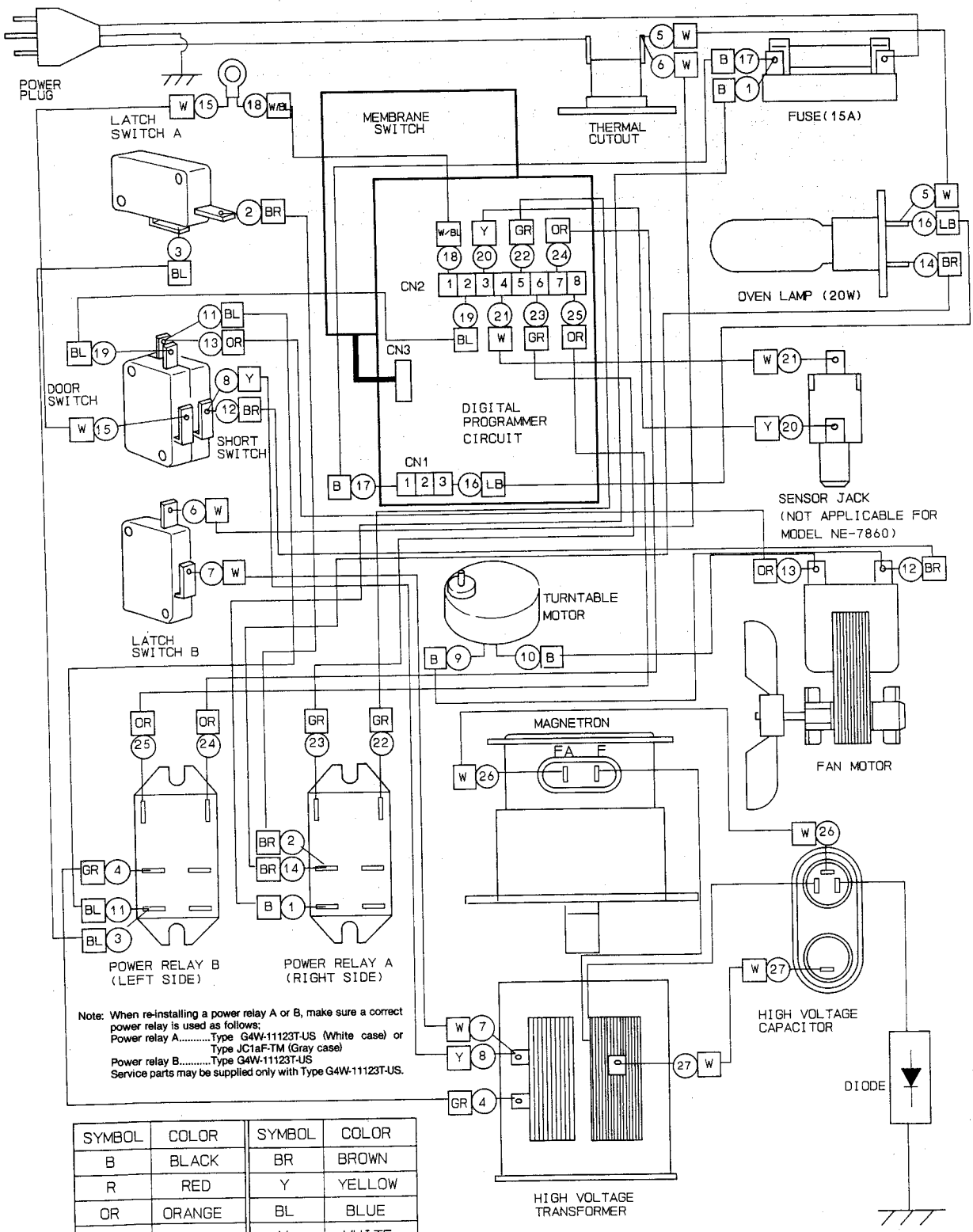


Fig. 2

WIRING DIAGRAM (NE-7865, NE-7860, NE-7845)

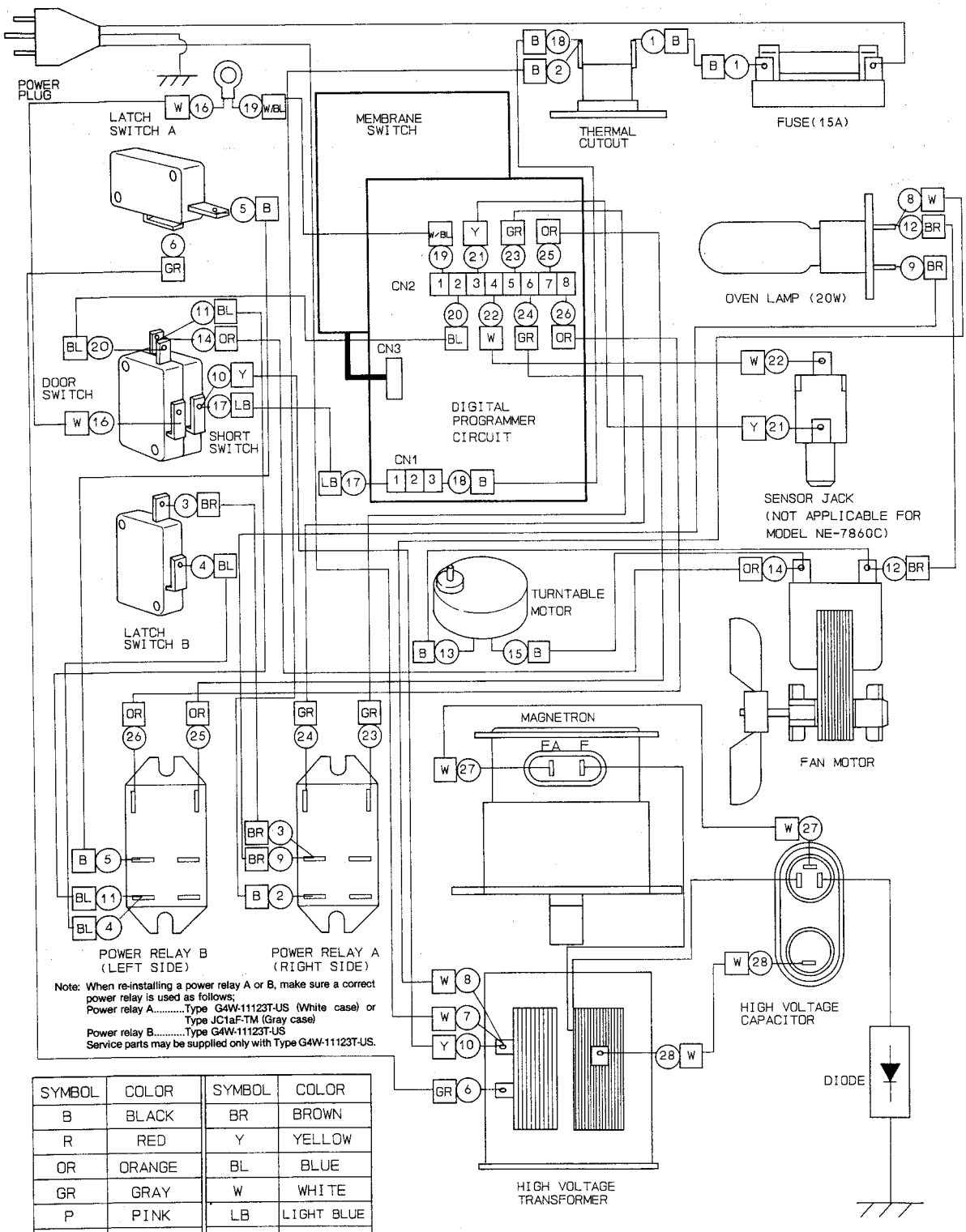


Note: When re-installing a power relay A or B, make sure a correct power relay is used as follows;
Power relay A.....Type G4W-11123T-US (White case) or Type JC1aF-TM (Gray case)
Power relay B.....Type G4W-11123T-US
Service parts may be supplied only with Type G4W-11123T-US.

SYMBOL	COLOR	SYMBOL	COLOR
B	BLACK	BR	BROWN
R	RED	Y	YELLOW
OR	ORANGE	BL	BLUE
GR	GRAY	W	WHITE
P	PINK	LB	LIGHT BLUE
S.W	SHIELDED WIRE	W/BL	WHITE/BLUE

Fig. 3

WIRING DIAGRAM (NE-7865C, NE-7860C)



SYMBOL	COLOR	SYMBOL	COLOR
B	BLACK	BR	BROWN
R	RED	Y	YELLOW
OR	ORANGE	BL	BLUE
GR	GRAY	W	WHITE
P	PINK	LB	LIGHT BLUE
S.W	SHIELDED WIRE	W/BL	WHITE/BLUE

Fig. 4

DESCRIPTION OF OPERATING SEQUENCE

1. Variable power cooking control

The coil of power relay B is energized intermittently by the digital programmer circuit, when the oven is set at any power selection except for High power position. The digital programmer circuit controls the ON-OFF time of power relay B contacts in order to vary the output power of the microwave oven from "Warm" to "High" power.
One complete ON and OFF cycle of power relay B is 22 seconds.
The relation between indications on the control panel and the output of the microwave oven is as shown in **Fig. 5.**

NOTE: **The ON/OFF time ratio does not correspond with the percentage of microwave power since approximately 2 seconds are required for heating of magnetron filament.**

2. Cyclic defrost

When Defrost power and defrosting time is selected and Start pad is tapped:

(A) The digital programmer circuit (DPC) divides the total defrosting time into 8 cycles of alternating ON-OFF intervals of Defrosting power and standing periods. (See **Fig. 6**)

(B) During Defrosting periods, power relay B is energized for 9 seconds and de-energized for 12 seconds by DPC resulting in approximately 245 watts of microwave power. (See **Fig. 7**)

(C) During Standing periods, power relay B is always open resulting in no microwave power.

NOTE: **Defrost time selected is converted into seconds by the DPC but display will show selected time in minutes and seconds as programmed. The total number of seconds is divided into 8 time periods. The remainder (seconds not equally divisible by 8) are added to the last standing time period.**

Example 1: If defrosting time is selected for 2 minutes 56 seconds, each operating period will be as follows: (See **Fig. 8**)
2 minutes 56 seconds = 176 seconds
176/8 = 22

Example 2: If Defrosting time is selected for 5 minutes, each operating period will be as follows : (See **Fig. 9**)
5 minutes = 200 seconds
200/8 = 27 and remainder is 4 seconds.
The 4 seconds is added to the last time period.

NOTE: **When defrosting time is selected for not more than 7 seconds, the power relay B will not be energized at all.**

3. Temperature probe cooking control (For NE-7865, NE-7865C, NE-7845 only)

The digital programmer circuit turns off both power relay A and B when the food temperature, which is detected by the temp probe's thermistor, reaches the selected temperature and stops the oven. Current temperature of the food is displayed in rising 5°F increments starting at 95°F. If starting temperature is lower than 95°F, "L90F", signifying lower than 95°F., will be displayed until food reaches 95°F.

NOTE: **When the Temp-Hold feature is selected, the digital programmer circuit turns power relay B ON and OFF to maintain the desired temperature within the period as selected. When the temphold-ing period has elapsed, the DPC turns off both power relay A and B and stops the oven.**

INDICATION	OUTPUT POWER AGAINST HIGH POWER	ON, OFF TIME ON POWER RELAY B
High	22/22 (700W)	22S ON, 22S ON
M. High	21/22 (650W)	21S ON, 1S OFF, 21S ON, 1S OFF
Med	17/22 (480W)	17S ON, 5S OFF, 17S ON, 5S OFF
M. Low	13/22 (360W)	13S ON, 9S OFF, 13S ON, 9S OFF
Low	8/22 (190W)	8S ON, 14S OFF, 8S ON, 14S OFF
Warm	4/22 (70W)	4S ON, 18S OFF, 4S ON, 18S OFF
Defrost	Approx 110W	Please refer to description of cyclic defrost.

Fig. 5

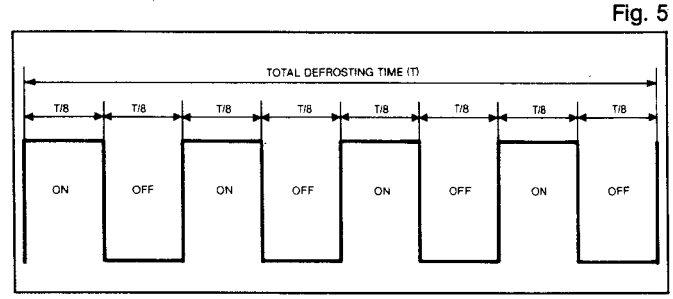


Fig. 6

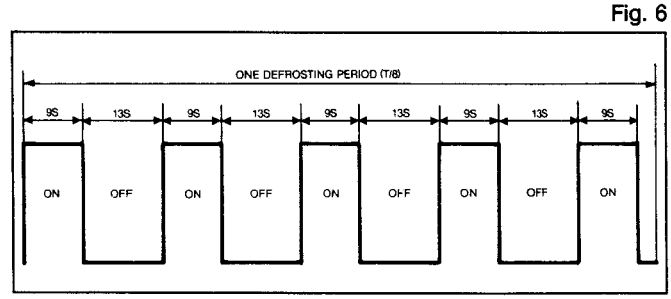


Fig. 7

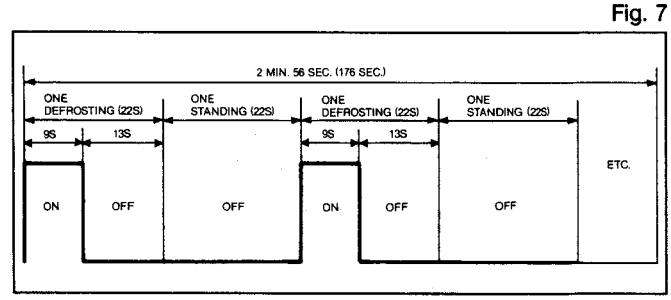


Fig. 8

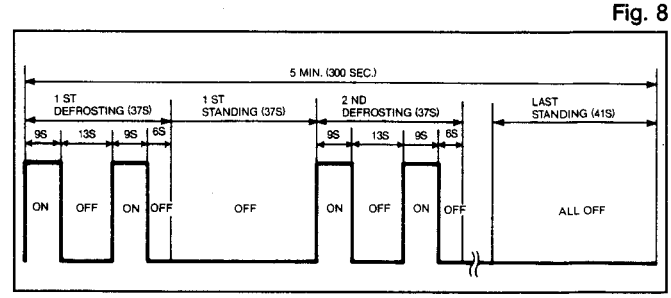


Fig. 9

4. Auto weight cook control (For NE-7860, NE-7860C only)

Consists of the following pads :

- Auto Weight Cook Pad
- Weight Pads
- Start Pad

When the Auto Weight Control, Cook feature is selected by tapping the appropriate key pads and the start pad is tapped.

(A) The digital programmer circuit determines the power level and cooking time to complete cooking and indicates the operating state in the display window. (See **Fig. 10**)
Fig. 10 shows the corresponding cooking times with respective weights by categories.

(B) When cooking time in the display window has elapsed, the oven turns off automatically by the controlled signal from the digital programmer circuit.

WEIGHT SELECTED	DISPLAY	TOTAL COOKING TIME						
		CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	CATEGORY 6	CATEGORY 7
1 LB	1.0 lb	7 min. 40 sec.	9 min. 40 sec.	12 min. 40 sec.	10 min. 00 sec.	12 min. 20 sec.	12 min. 20 sec.	8 min. 00 sec.
2 LB	2.0 lb	15 min. 20 sec.	19 min. 20 sec.	25 min. 20 sec.	20 min. 00 sec.	24 min. 40 sec.	24 min. 40 sec.	16 min. 00 sec.
3 LB	3.0 lb	23 min. 00 sec.	29 min. 00 sec.	38 min. 00 sec.	30 min. 00 sec.	37 min. 00 sec.	37 min. 00 sec.	24 min. 00 sec.
4 LB	4.0 lb	30 min. 40 sec.	38 min. 40 sec.	50 min. 40 sec.	40 min. 00 sec.	49 min. 20 sec.	49 min. 20 sec.	40 min. 00 sec.
5 LB	5.0 lb	38 min. 20 sec.	48 min. 20 sec.	1 hour 03 min.	50 min. 00 sec.	1 hour 01 min.	1 hour 01 min.	50 min. 00 sec.
6 LB	6.0 lb	46 min. 00 sec.	58 min. 00 sec.	1 hour 16 min.	1 hour 00 min.	1 hour 14 min.	1 hour 14 min.	1 hour 00 min.
7 LB	7.0 lb	53 min. 40 sec.	1 hour 07 min.	1 hour 28 min.	—	—	—	1 hour 10 min.
8 LB	8.0 lb	1 hour 01 min.	1 hour 17 min.	1 hour 41 min.	—	—	—	1 hour 20 min.
9 LB	9.0 lb	—	—	—	—	—	—	1 hour 30 min.
10 LB	10.0 lb	—	—	—	—	—	—	1 hour 40 min.
11 LB	11.0 lb	—	—	—	—	—	—	1 hour 50 min.
12 LB	12.0 lb	—	—	—	—	—	—	2 hour 00 min.
13 LB	13.0 lb	—	—	—	—	—	—	2 hour 10 min.
14 LB	14.0 lb	—	—	—	—	—	—	2 hour 20 min.
15 LB	15.0 lb	—	—	—	—	—	—	2 hour 30 min.
16 LB	16.0 lb	—	—	—	—	—	—	2 hour 40 min.

Fig. 10

5. Auto weight defrost control

Consists of the following pads:
- Auto Weight Defrost Pad (Category Pad)
- Weight Pads
- Start Pad

When the Auto Weight Control, Defrost feature is selected and the Start Pad is tapped:

(A) The digital programmer circuit functions exactly the same as when Auto Weight Cook control is selected, except that cooking powers and cooking times are as shown in **Fig. 11.**
Fig. 11 shows the defrosting times for respective weights by categories.

6. Auto weight frozen cook control (For NE-7860, NE-7860C only)

Consists of the following pads:
- Auto Weight Frozen Cook Pad
- Weight Pads
- Start Pad

When the Auto Weight Frozen Cook feature is selected and the Start Pad is tapped:

(A) The digital programmer circuit functions exactly the same as when Auto Weight Cook control is selected, except that cooking powers and cooking times are as shown in **Fig. 12.**

WEIGHT SELECTED	DISPLAY	TOTAL DEFROSTING TIME		
		CATEGORY 1	CATEGORY 2	CATEGORY 3
1 LB	1.0 lb	11 min. 30 sec.	12 min. 30 sec.	11 min. 30 sec.
2 LB	2.0 lb	23 min. 00 sec.	25 min. 00 sec.	23 min. 00 sec.
3 LB	3.0 lb	34 min. 30 sec.	37 min. 30 sec.	34 min. 30 sec.
4 LB	4.0 lb	46 min. 00 sec.	51 min. 00 sec.	—
5 LB	5.0 lb	1 hour 02 min.	1 hour 07 min.	—
6 LB	6.0 lb	1 hour 18 min.	1 hour 24 min.	—
7 LB	7.0 lb	1 hour 34 min.	1 hour 40 min.	—
8 LB	8.0 lb	1 hour 50 min.	1 hour 43 min.	—
9 LB	9.0 lb	—	1 hour 48 min.	—
10 LB	10.0 lb	—	1 hour 52 min.	—
11 LB	11.0 lb	—	1 hour 57 min.	—
12 LB	12.0 lb	—	2 hour 01 min.	—
13 LB	13.0 lb	—	2 hour 06 min.	—
14 LB	14.0 lb	—	2 hour 10 min.	—
15 LB	15.0 lb	—	2 hour 15 min.	—
16 LB	16.0 lb	—	2 hour 19 min.	—

Fig. 11

WEIGHT SELECTED	DISPLAY	AUTO WEIGHT FROZEN COOKING TIME		
		CATEGORY 1	CATEGORY 3	CATEGORY 5
1 OZ	1 oz	48 sec.	54 sec.	45 sec.
5 OZ	5 oz	4 min. 00 sec.	4 min. 30 sec.	3 min. 45 sec.
10 OZ	10 oz	8 min. 00 sec.	9 min. 00 sec.	7 min. 30 sec.
15 OZ	15 oz	12 min. 00 sec.	12 min. 00 sec.	11 min. 15 sec.
20 OZ	20 oz	16 min. 00 sec.	14 min. 30 sec.	15 min. 00 sec.
25 OZ	25 oz	20 min. 00 sec.	17 min. 00 sec.	18 min. 45 sec.
30 OZ	30 oz	24 min. 00 sec.	19 min. 30 sec.	22 min. 30 sec.
32 OZ	32 oz	25 min. 36 sec.	20 min. 30 sec.	24 min. 00 sec.
		CATEGORY 2	CATEGORY 4	
1 OZ	1 oz	51 sec.	30 sec.	
5 OZ	5 oz	4 min. 15 sec.	2 min. 30 sec.	
10 OZ	10 oz	8 min. 30 sec.	5 min. 00 sec.	
15 OZ	15 oz	12 min. 45 sec.	7 min. 30 sec.	
16 OZ	16 oz	13 min. 36 sec.	8 min. 00 sec.	

Fig. 12

CAUTIONS TO BE OBSERVED WHEN TROUBLESHOOTING

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. Though it is free from danger in ordinary use, extreme care should be taken during repair.

CAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

1. Check the grounding

Do not operate on a 2-wire extension cord. The microwave oven is designed to be used when grounded. It is imperative, therefore, to make sure it is grounded properly before beginning repair work.

2. Warning about the electric charge in the high voltage capacitor

For about 30 seconds after the oven stops, an electric charge remains in the high voltage capacitor. When replacing or checking parts, short between oven chassis and the terminal of high voltage capacitor (terminal of lead wire from magnetron filament, high voltage transformer filament lead wire and diode lead wire) with an insulated screwdriver to discharge. (See **Fig. 13**)

WARNING

There is high-voltage present, with high-current capabilities in the circuits of the high voltage winding and filament winding of the high voltage transformer. It is extremely dangerous to work on or near these circuits with oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

WARNING

Never touch any circuit wiring with your hand nor with an insulated tool during operation.

3. When parts must be replaced, remove the power plug from the outlet.

4. When the 15 Amp fuse is blown due to the operation of short switch:

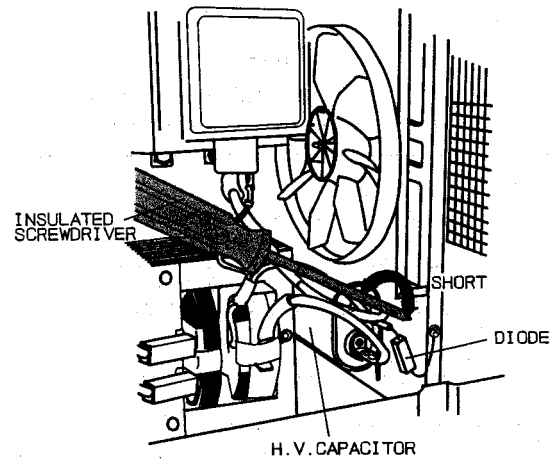
(A) Replace the latch switch A (primary), latch switch B (secondary) and short switch.....NE-7865, NE-7860, NE-7845.
(B) Replace the latch switch B (primary) and short switch.....NE-7865C, NE-7860C.
(C) This is mandatory. Refer to page 33 for the necessary adjustments for these switches.
(D) When replacing the fuse, confirm that it has the appropriate rating for these models.

5. Avoid inserting nails, wire, etc. through any holes in the unit during operation.

Never insert a wire, nail or any other metal object through the lamp holes on the cavity or any other holes or gaps, because such objects may work as an antenna and cause microwave leakage.

6. Confirm after repair

(A) After repair or replacement of parts, make sure that the screws of the oven, etc. are neither loose nor missing.
Microwaves might leak if screws are not properly tightened.
(B) Make sure that all electrical connections are tight before inserting the plug into the wall outlet.
(C) Check for microwave energy leakage, (Refer to procedure for measuring microwave energy leakage on page 34).



Touch chassis side first then short to the high voltage capacitor terminal.

Fig. 13

DISASSEMBLY AND PARTS REPLACEMENT PROCEDURE

1. Replacement of the magnetron

CAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

Removal of Positive Lock connector

The positive lock connector is a specially designed loose free connector and you will find this connector in many lead wire connections. To remove this connector, pull the lead wire by pressing an extruded lever in the center of receptacle terminal as shown in **Fig. 14.**

(A) Discharge the high voltage capacitor. (See page 29)
(B) Remove 2 screws holding thermal cutout.
(C) Remove 1 screw holding air guide A.
(D) Remove 2 high voltage leads from filament terminals.
(E) Remove 4 nuts holding the magnetron.

NOTE: To prevent microwave leakage, tighten mounting nuts properly making sure there is no gap between the waveguide and the magnetron.

CAUTION

When connecting 2 filament lead wires to the magnetron terminals, be sure to connect the lead wires in the correct position. The lead wire of high voltage transformer should be connected to "F terminal" and the lead wire from high voltage capacitor should be connected to "FA terminal". (See **Fig. 15)**

2. Replacement of the fan motor (See Fig. 15)

(A) Remove the magnetron.
(B) Disconnect 2 lead wires connected to the fan motor.
(C) Remove fan blade from the fan motor shaft.
(D) Remove 2 screws holding the fan motor.

3. Replacement of the digital programmer circuit (D.P.C.).

NOTE: Be sure to ground any static electric charge built up in your body, before handling the D.P.C.

(A) Disconnect 8-pin and 3-pin connectors from D.P.C. (**Fig.16**)
(B) Disconnect all lead wires from power relay A and power relay B. (**Fig. 16**)
(C) Remove 2 screws holding escutcheon base assy. (**Fig. 16**)
(D) Release CN3 connector's lid of the D.P.C. and pull off flat cable of the membrane switch. (**Fig. 17**)
(E) Remove 3 screws holding the D.P.C. (**Fig. 17**)

NOTE: When re-installing a power relay A or B, make sure a correct power relay is used as follows;
Power relay A···Type G4W-11123T-US (White case) or
Type JC1aF-TM (Gray case)
Power relay B···Type G4W-11123T-US
Service parts may be supplied only with Type G4W-11123T-US.

4. Replacement of the low voltage transformer.

NOTE: Be sure to ground any static electric charge built up in your body before handling the D.P.C.

(A) Using solder wick or a desoldering tool, carefully remove all solder from the terminal pins of the low voltage transformer.

NOTE: Do not use a soldering iron or desoldering tool of more than 30 watts on D.P.C. contacts.

(B) With all the terminal pins cleaned and separated from D.P.C. contacts, remove the defective transformer and install new transformer making sure all terminal pins are inserted completely. Resolder all terminal contacts carefully.

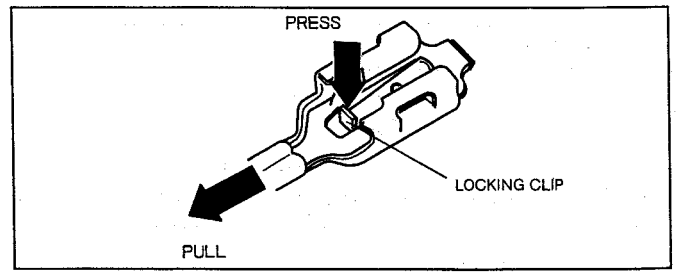


Fig. 14

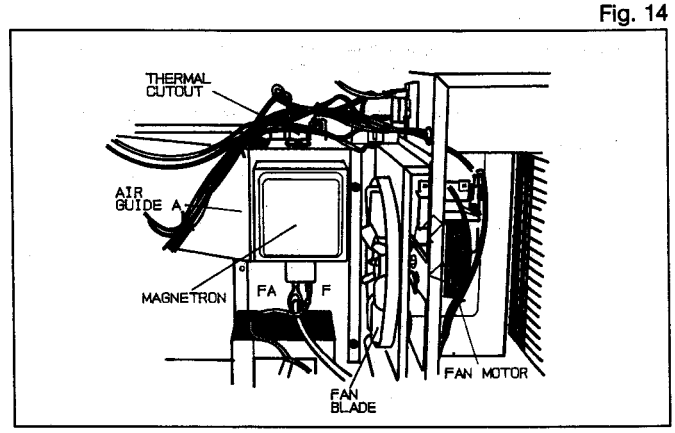


Fig. 15

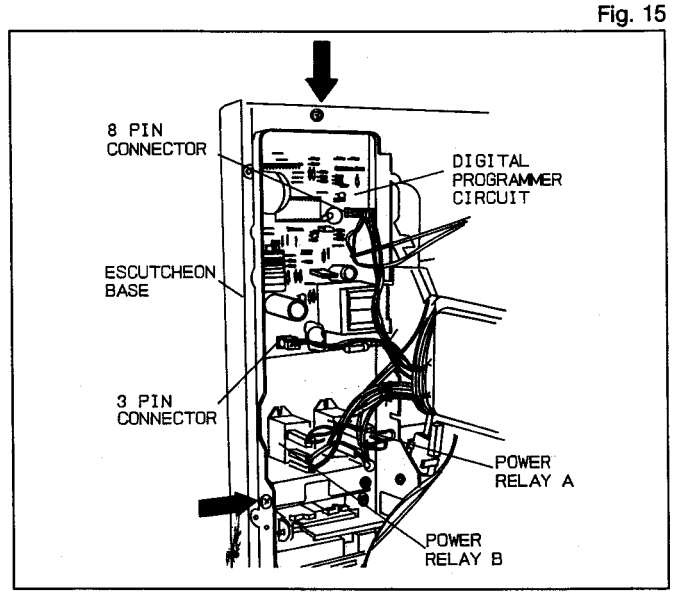


Fig. 16

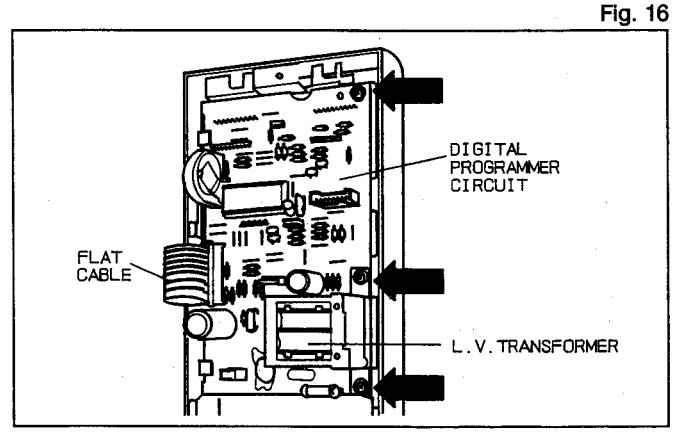


Fig. 17

5. Disassembly and replacement of the door assembly.

(A) Remove 2 bolts holding the upper hinge to the oven.
(B) Open the door and while pulling the door toward you, work the upper hinge out through the hole in the oven.
NOTE: Do not lose spacer at the bottom hinge.
(C) Remove 4 screws holding the door C. (**Fig. 18**)
(D) Remove the door C by carefully pulling outward starting from the upper right hand corner.
(E) Separate the door A from door E by carefully freeing the 8 catch hooks on door A while pulling outward. (See **Fig. 20**)
(F) Remove door keys, door key lever, door key spring and handle pins from the door E. (**Fig. 19**)
(G) When mounting the door to the oven, be sure to adjust the door parallel to the bottom line of the oven face plate by moving the upper hinge and lower hinge in the direction necessary for proper alignment. (**Fig. 22**)
Also adjust so that the door has no play between the inner door surface and oven frame. If the door is not mounted properly, microwave may leak from the clearance between the door and the oven. (**Fig. 23**)

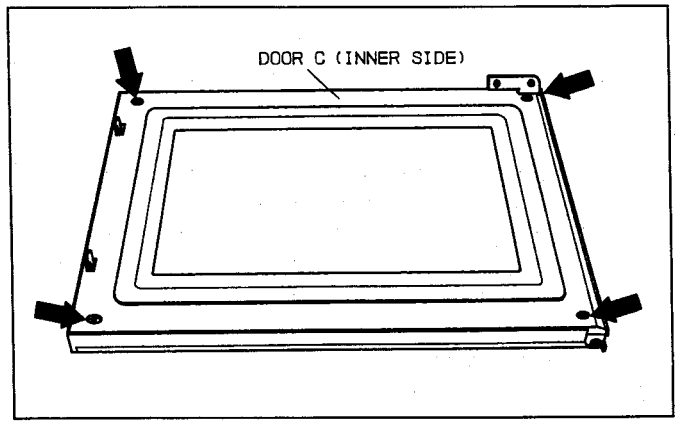


Fig. 18

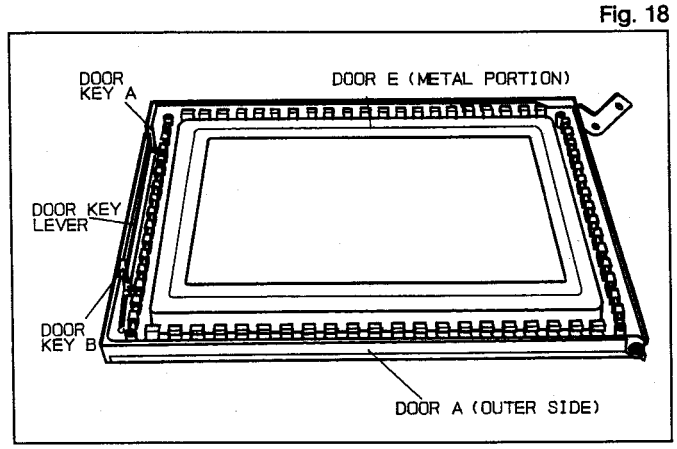


Fig. 19

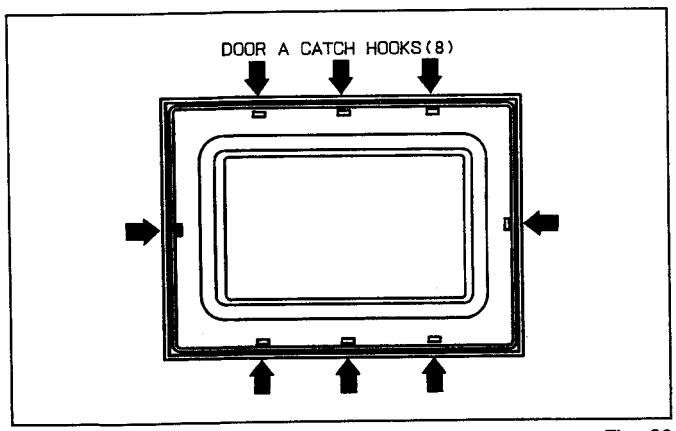


Fig. 20

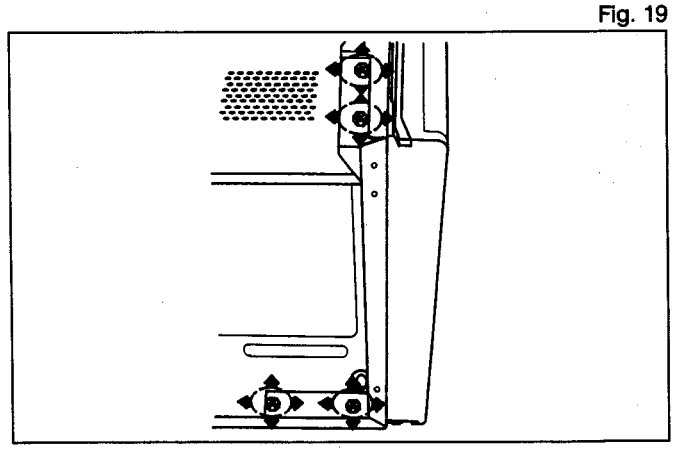


Fig. 22

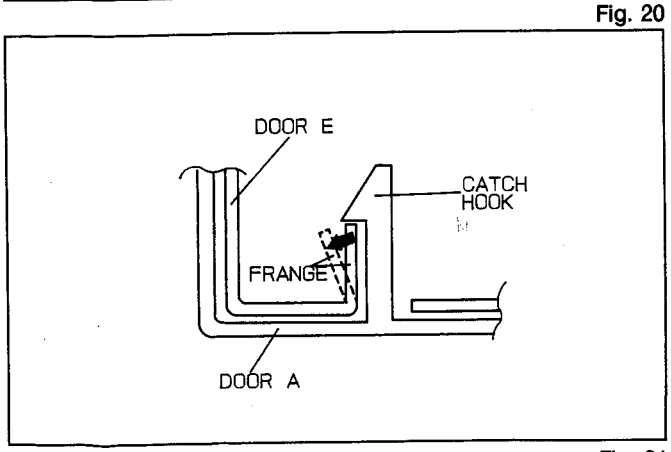


Fig. 21

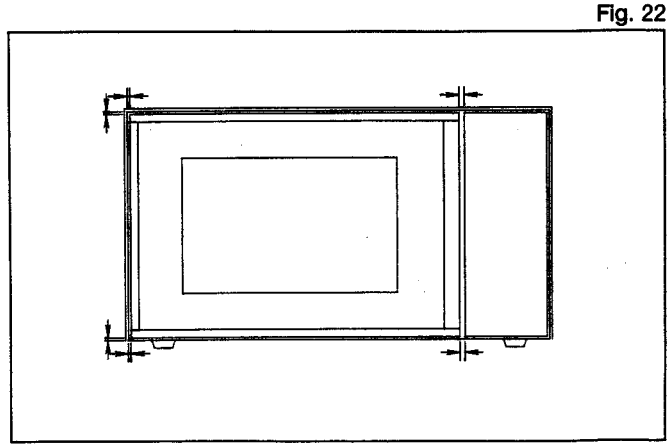


Fig. 23

COMPONENT TEST PROCEDURE

CAUTION

1. High voltage is present at the high voltage terminal of the high voltage transformer during any cook cycle.
2. It is neither necessary nor advisable to attempt measurement of the high voltage.
3. Before touching any oven components, or wiring, always unplug the oven from its power source and discharge the capacitor. (See page 29.)

1. High voltage transformer (See Fig. 24)

(A) Remove connections from the transformer terminals and check continuity.
(B) Normal (cold) resistance readings should be as follows:
Secondary winding ..... Approx. 50Ω ~ 80Ω
Filament winding ..... Approx. 0Ω
Primary winding ..... Approx. 0Ω ~ 1Ω

2. High voltage capacitor

(A) Check continuity of capacitor with meter on highest OHM scale.
(B) A normal capacitor will show continuity for a short time, and then indicate 9MΩ once the capacitor is charged.
(C) A shorted capacitor will show continuous continuity.
(D) An open capacitor will show constant 9MΩ.
(E) Resistance between each terminal and chassis should be infinite.

3. Diode

(A) Isolate the diode from the circuit by disconnecting the leads.
(B) With the ohmmeter set on the highest resistance scale, measure the resistance across the diode terminals. Reverse the meter leads and again observe the resistance reading. Meter with 6V, 9V or higher voltage batteries should be used to check the front-to-back resistance of the diode, otherwise an infinite resistance may be read in both directions.
A normal diode's resistance will be infinite in one direction and several hundred kΩ in the other direction.

4. Magnetron (See Fig. 25)

Continuity checks can only indicate an open filament or a shorted magnetron. To diagnose for an open filament or shorted magnetron.
(A) Isolate magnetron from the circuit by disconnecting the leads.
(B) A continuity check across magnetron filament terminals should indicate one ohm or less.
(C) A continuity check between each filament terminal and magnetron case should read open.

5. To test the sensor probe's thermistor (See Fig. 26)

Fill a container partially with lukewarm water and place a thermometer in it. Then take the sensor probe out of the oven and place it in the container next to the thermometer so they will both sense the exact same temperature. Now take another container with boiling hot water and gradually pour this into the first container to achieve graduated temperature steps. At each temperature step listed in the chart **(Fig. 26)**, you should read the approximate corresponding resistance with an ohmmeter. If not, the probe is defective and should be replaced.

NOTE: Of cource all of the above steps are very dependent upon the accuracy of the ohmmeter, thermometer, and human error. Please take these factors carefully into consideration before determining if the probe is defective.

6. Membrane key board (Membrane switch assembly)

Check continuity between switch terminals, by pressing an appropriate pad on the key board.
The contacts assignment of the respective pads on the key board is as shown in **Fig. 27.**

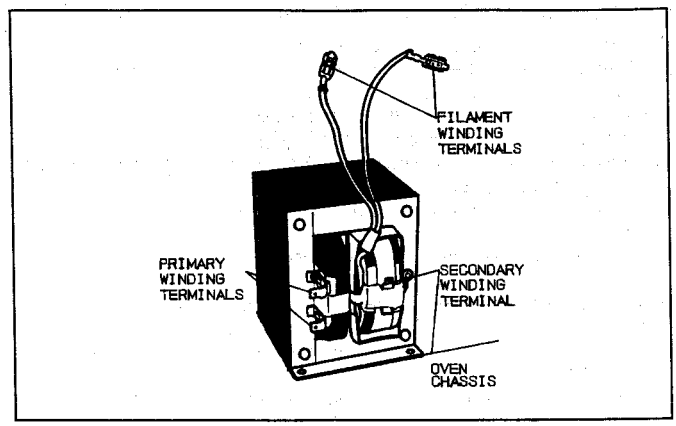


Fig. 24

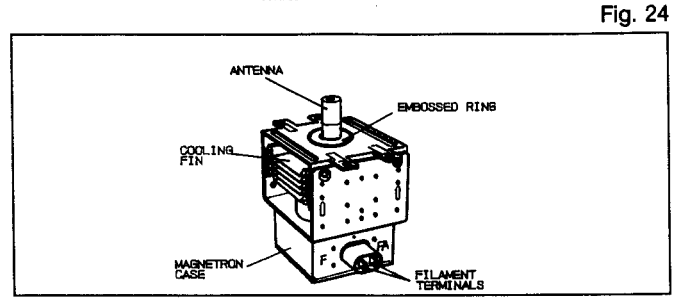


Fig. 25

Temp. (°C)	Temp. (°F)	Thermistor Resistance Nominal (kΩ)	Temp. (°C)	Temp. (°F)	Thermistor Resistance Nominal (kΩ)
30	86	44.4	60	140	13.7
35	95	35.9	65	149	11.5
40	104	29.3	70	158	9.7
45	113	24.0	75	167	8.2
50	122	19.8	80	176	7.0
55	131	16.4	85	185	6.0
			90	194	5.1

Fig. 26

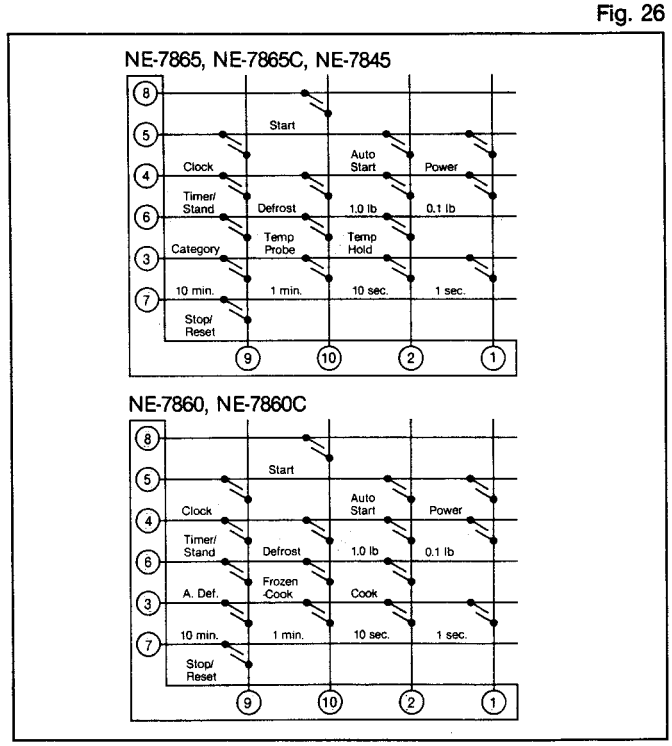


Fig. 27

MEASUREMENTS AND ADJUSTMENTS

WARNING

For continued protection against radiation hazard, replace only with identical replacement parts (Part No. ANE6142-F60, Type No. V-15G-3C26 for latch switch A and B and Part No. ANE6178-F80, Type No. V-15-2C25 for short switch).
When the 15 Amp. fuse is blown due to the operation of short switch, you must replace latch switch A, latch switch B (latch switch A is not needed for NE-7865C and NE-7860C) and short switch then follow the adjustment procedures below.
Interlock switch replacement — In replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise, deficient in their ability to hold the switches.

1. Adjustment of latch switch A

(A) Mount the latch switch A to the door hook A as shown in **Fig. 28**.
NOTE: **No specific adjustment during installation of latch switch A to the door hook A is necessary.**
(B) When mounting the door hook A assembly to the oven assembly, be sure to adjust the door hook A assembly by moving in the arrow direction so that the oven door will not have any play in it. **(Fig. 29)**
Check for play in the door by pulling on the door.
Make sure that the latch key positions correctly during adjustment. Also make sure that the latch key moves smoothly after adjustment is completed. Completely tighten the screws holding the door hook A assembly to the oven assembly.

2. Adjustment of latch switch B, door switch and short switch.

(A) Mount the latch switch B, the door switch and the short switch to the door hook B as shown in **Fig. 30**.
NOTE: **No specific adjustment during installation of latch switch B, the short switch and door switch to the door hook B is necessary.**
(B) When mounting the door hook B assembly to the oven assembly, adjust the door hook B assembly by moving it in the direction of arrow in **Fig. 29** so that the oven door will not have any play in it.
Check for play in the door by pulling on the door.
Make sure that the latch key moves smoothly after adjustment is completed. Completely tighten the screws holding the door hook B assembly to the oven assembly.

3. Measurement of the magnetron's output

The power output of the magnetron can be measured by performing a simple water temperature rise test.
Equipment needed for the Test:
*Two 1 liter beakers
*One glass thermometer
NOTE: **Check the line voltage under load. Low voltage will lower the magnetron output. Make all temperature and time tests with accurate equipment.**
(A) Fill the two 1 liter beakers with water and mark one A and one B.
(B) Stir the water in each beaker with the thermometer and record each beaker's temperature:
Beaker A's temperature = T1A
Beaker B's temperature = T1B
(C) The average value (T1) of T1A and T1B is calculated as follows:

$$T1 = \frac{T1A+T1B}{2}$$

(D) Place both beakers on the center of the glass cook plate.
Set the oven for High power and set two minutes. Heat the water for exactly two minutes.
(E) When heating is finished, stir the water again with the thermometer and measure the temperature rises as T2A and T2B.
(F) The average value (T2) of T2A and T2B is calculated as follows:

$$T2 = \frac{T2A+T2B}{2}$$

(G) Subtract T1 from T2. This will give you the temperature rise.
(H) The normal temperature rise for this model is 16° to 20°F (8.9° to 11°C) at the "High" power selection.
*If no temperature rise is noted, refer to the "TROUBLESHOOTING GUIDE".
NOTE 1: **In order to determine (not to measure the output power) if oven oscillates normally or not, you may conduct this test by heating one liter water for one minute. In this case, the temperature rise will be small due to microwave characteristics but should be over 13.5°F. (7.5°C.)**
NOTE 2: **Please note that this model has no test resistor for measuring diode or anode current. When you check the high voltage circuit, follow the procedure in the troubleshooting guide on page 35.**

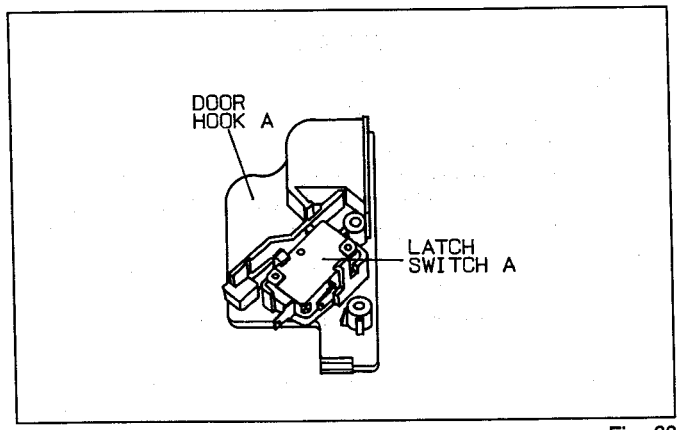


Fig. 28

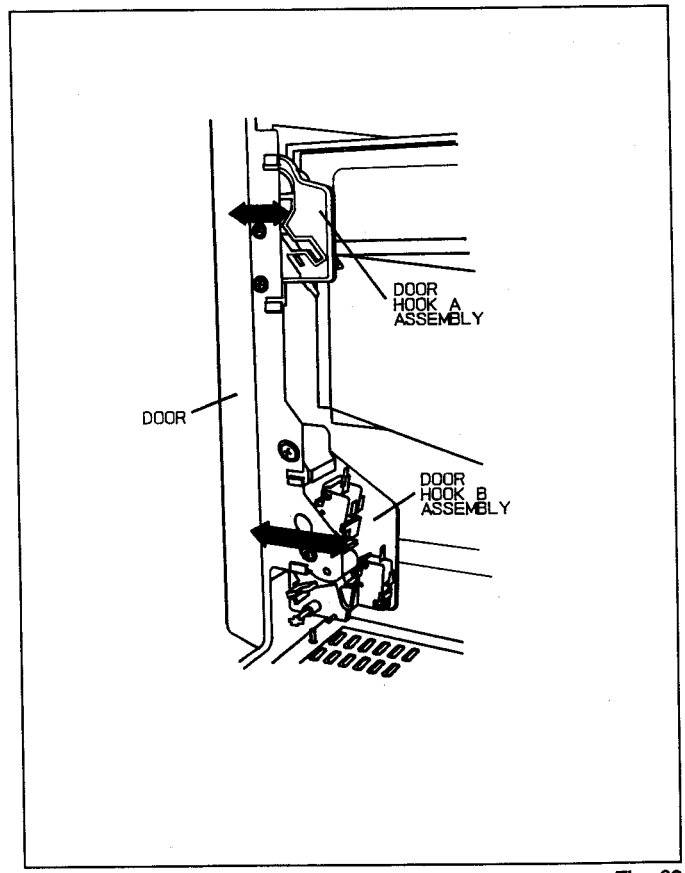


Fig. 29

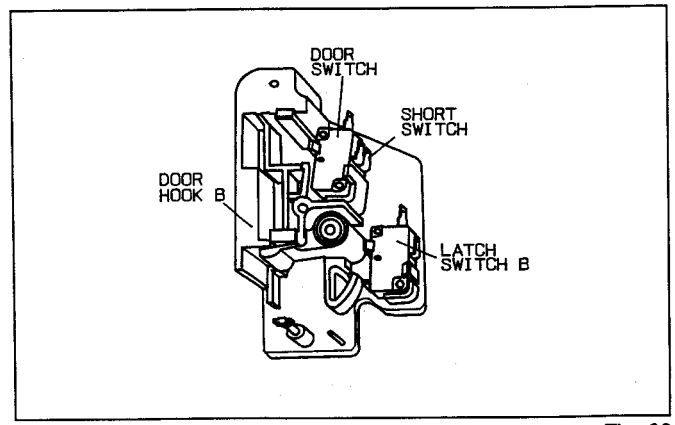


Fig. 30

PROCEDURE FOR MEASURING RADIATION LEAKAGE

WARNING

Check for radiation leakage after every servicing. Should the leakage be more than 2 mw/cm² (1mw/cm² for Canada) inform the Panasonic Co. (MESCO, PHI, PSC, or MELCA) immediately. After repairing or replacing any radiation safety device, keep a written record for future reference, as required by D.H.H.S and NHW regulation. This required must be strictly observed. In addition, the leakage reading must be recorded on the service repair ticket while in the customer's home.

NOTE: The U.S. government standard is 5 mw/cm² while in the customer's home. 2mw/cm² stated here is Panasonic's own voluntary standard. (1 mw/cm² for Canada)

1. Equipment

*Electromagnetic radiation monitor
*Glass thermometer 212°F or 100°C
*600cc glass beaker

2. Procedure for measuring radiation leakage.

Note before measuring

(1) Do not exceed meter full scale deflection. Leakage monitor should initially be set to the highest scale.
*(2) To prevent false readings the test probe should be held by the grip portion of the handle only and moved along the shaded area shown in **Fig. 31** no faster than 1 inch/sec (2.5 cm/sec)*
(3) Leakage with the outer panel removed·····less than 5mw/cm²
(4) Leakage for a fully assembled oven with door normally closed··· ···less than 2mw/cm² (1mw/cm² for Canada)
(5) Leakage for a fully assembled oven [Before the latch switch (primary) is interrupted] while lightly pressing the door release lever·····less than 2mw/cm²

(A) Pour 275 ± 15cc (9ozs ± 1/2oz) of 20 ± 5°C (68 ± 9°F) water in a beaker which is graduated to 600cc, and place the beaker in the center of the oven.
(B) Set the radiation monitor to 2450MHz and use it following the manufacturer's recommended test procedure to assure correct results.
(C) When measuring the leakage, always use the 2 inch (5 cm) spacer supplied with the probe.
(D) Tap the start pad and with the magnetron oscillating, measure the leakage by holding the probe perpendicular to the surface being measured.

(1) Measurement with the outer panel removed.

Whenever you replace the magnetron, measure for radiation leakage before the outer panel is installed and after all necessary components are replaced or adjusted. Special care should be taken in measuring around the magnetron. (**Fig. 32**)

WARNING

Avoid contacting any high voltage parts.

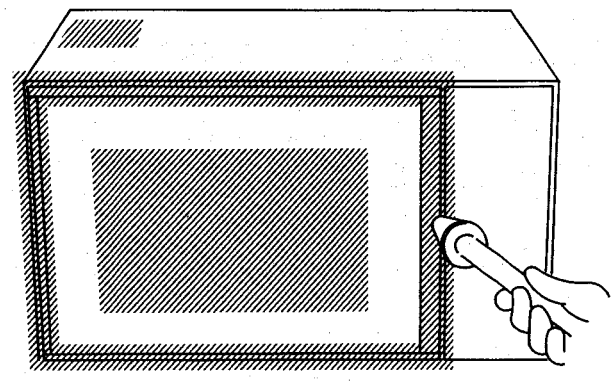
(2) Measurements with a fully assembled oven.

After all components, including the outer panel are fully assembled, measure for radiation leakage around the door periphery, the door viewing window, the exhaust opening and air inlet openings.

3. Record keeping and notification after measurement

(A) After any adjustment or repair to a microwave oven a leakage reading must be taken. Record this leakage reading on the repair ticket even if it is zero.
A copy of this repair ticket and the microwave leakage reading should be kept by repair facility.
(B) Should the radiation leakage be more than 2 mw/cm² (1mw/cm² for Canada) after determining that all parts are in good condition, functioning properly, and genuine replacement parts as listed in this manual have been used, immediately notify the PANASONIC CO. (MESCO, PHI, PSC or MELCA).

4. At least once a year, have the radiation monitor checked for calibration by its manufacturer.



MOVE PROBE ALONG SHADED AREA (▨) AROUND EXHAUST OPENINGS (as shown) AND AROUND AIR INLET OPENING

Fig. 31

WARNING

AVOID CONTACTING ANY HIGH VOLTAGE PARTS.

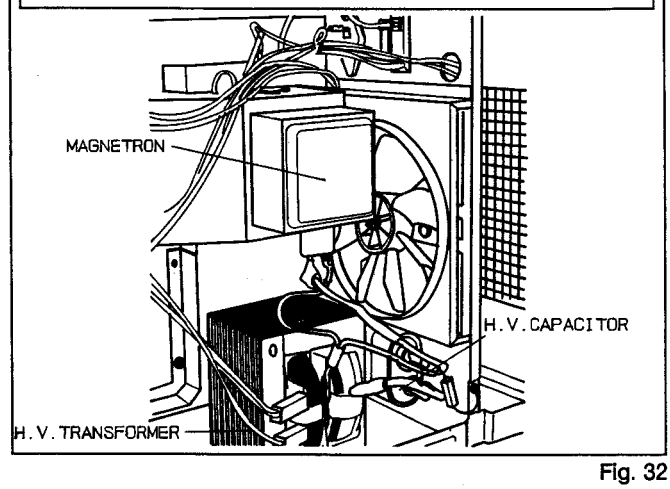


Fig. 32

TROUBLESHOOTING GUIDE

CAUTION

1. Check grounding before checking for trouble.
2. Be careful of the high voltage circuit.
3. Discharge high voltage capacitor. (See page 29)
4. When checking the continuity of the switches or the high voltage transformer, disconnect one lead wire from these parts and then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.
5. Do not touch any parts of the circuitry on the digital programmer circuit since static electric discharge may damage this control panel.
   Always touch yourself to ground while working on this panel to discharge any static charge in your body.
6. A 120V AC is present at the primary circuit of low voltage transformer. When troubleshooting the DPC board with circuit energized, be careful of possible shock hazard.

First of all operate the microwave oven following the correct operating procedures described on pages 3 ~ 21 in order to find the exact cause of any trouble.

[TROUBLE 1] The following visual conditions indicate a probable defective digital programmer circuit (D.P.C.) or membrane key board (membrane switch assembly).

A. In case of following conditions, D.P.C. is defective.

1. Incomplete segments.
   (A) Segments missing.
   (B) Partial segments missing.
   (C) Digit flickering other than normal fluorescent slight flickering.
   (D) Colon does not turn on or does not blink when the clock pad is tapped.
2. A distinct change in the brightness of one or more numbers in the display.
3. One or more digits in the display not on when they should be.
4. Wrong or no power indicator light for power level selected.
5. Specific numbers (for example 2 or 3) will not display.
6. Display does not count down with time cooking or when using display as a timer.
7. Display does not count up with clock operation.
8. Oven is programmable and cooks normally but no display shows.
9. Display obviously jumps in time while counting down or up.
10. Display counts down noticeably too fast while cooking.
11. Display cannot shift from the first stage cooking to the second stage cooking even though Two Stage Cooking is programmed.
12. Display does not stop counting down with time cooking even when Stop/Reset Pad is tapped.
13. Time of day does not reappear when cooking is finished.

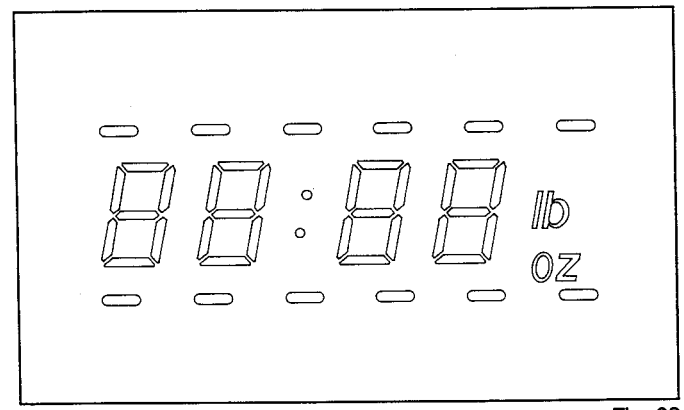
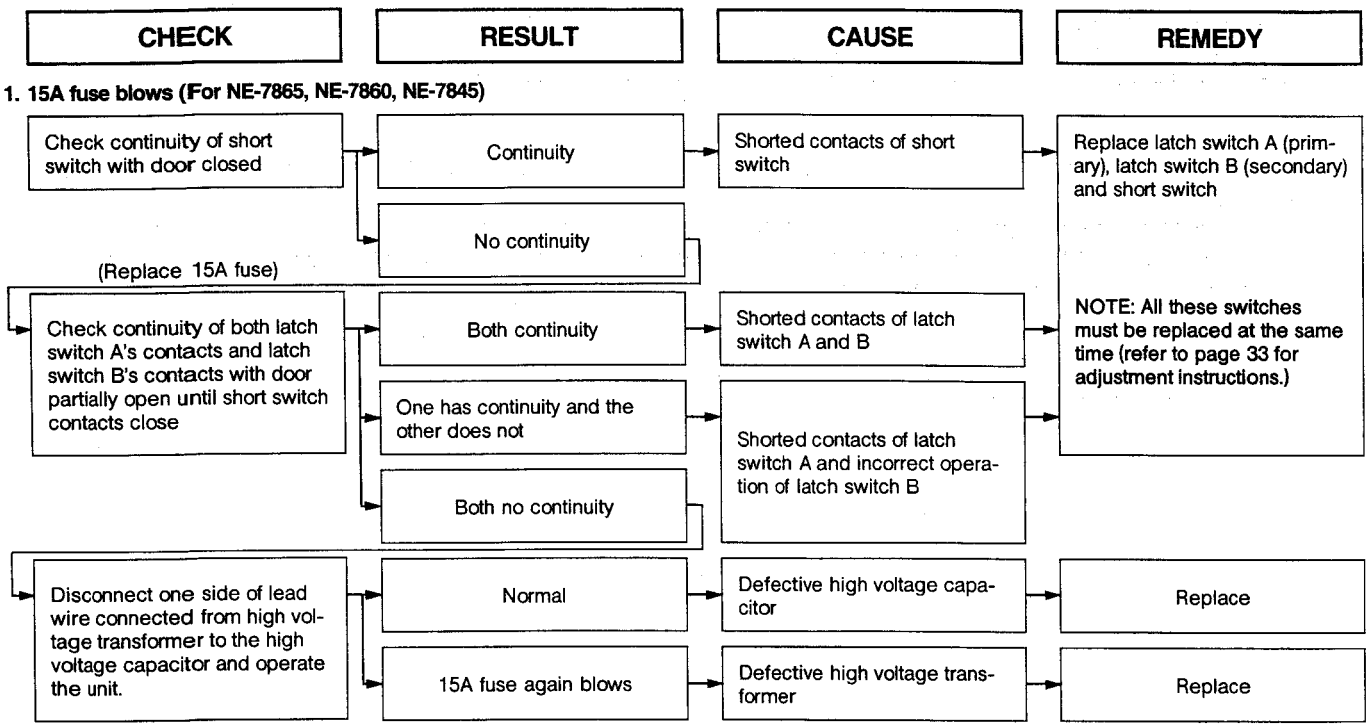


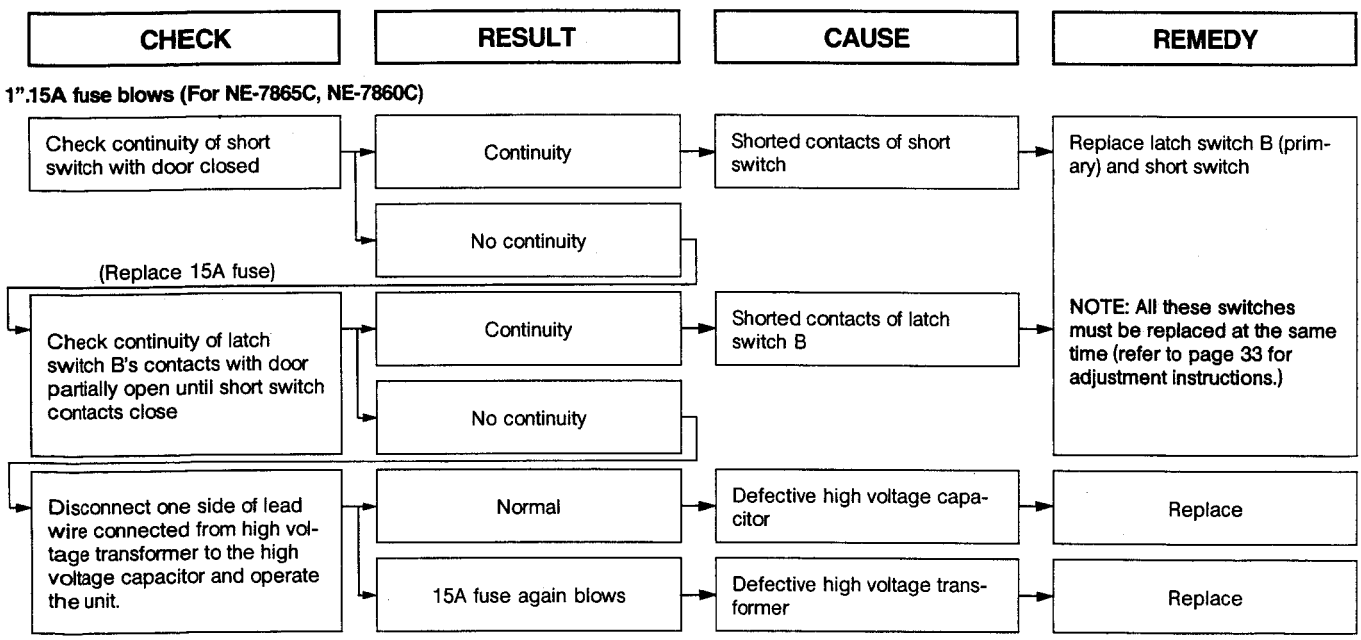
Fig. 33

B. In case of following conditions, either D.P.C. or membrane switch is defective.

CHECK	RESULT	CAUSE	REMEDY
1. Clock set cannot be programmed at all.			
Check continuity of membrane switch (between terminals 5 and 9) with clock pad tapped	No continuity	Defective membrane switch	Replace
	Continuity	Defective DPC	Replace
2. Some inputs cannot be programmed.			
Check continuity of membrane switch (refer to page 27 for the test procedures of membrane switch)	Some pads have no continuity	Defective membrane switch	Replace
	Normal	Defective DPC	Replace
3. Display indicates a number or figure different from one touched. Random programming when pressing other than touch pads or without pressing any at all. (intermittently)			
Replace membrane switch and recheck	Everythings works as specified	Defective membrane switch	Replace
	Still have trouble	Defective DPC	Replace

[TROUBLE 2] Oven does not operate at all; Display window does not display any figures and no key in of any pads will be accepted.


CHECK
RESULT
CAUSE
REMEDY
1. 15A fuse blows (For NE-7865, NE-7860, NE-7845)
Check continuity of short switch with door closed
Continuity
Shorted contacts of short switch
Replace latch switch A (primary), latch switch B (secondary) and short switch
No continuity
(Replace 15A fuse)
Check continuity of both latch switch A's contacts and latch switch B's contacts with door partially open until short switch contacts close
Both continuity
Shorted contacts of latch switch A and B
NOTE: All these switches must be replaced at the same time (refer to page 33 for adjustment instructions.)
One has continuity and the other does not
Shorted contacts of latch switch A and incorrect operation of latch switch B
Both no continuity
Disconnect one side of lead wire connected from high voltage transformer to the high voltage capacitor and operate the unit.
Normal
Defective high voltage capacitor
Replace
15A fuse again blows
Defective high voltage transformer
Replace


CHECK
RESULT
CAUSE
REMEDY
1".15A fuse blows (For NE-7865C, NE-7860C)
Check continuity of short switch with door closed
Continuity
Shorted contacts of short switch
Replace latch switch B (primary) and short switch
No continuity
(Replace 15A fuse)
Check continuity of latch switch B's contacts with door partially open until short switch contacts close
Continuity
Shorted contacts of latch switch B
NOTE: All these switches must be replaced at the same time (refer to page 33 for adjustment instructions.)
No continuity
Disconnect one side of lead wire connected from high voltage transformer to the high voltage capacitor and operate the unit.
Normal
Defective high voltage capacitor
Replace
15A fuse again blows
Defective high voltage transformer
Replace

CHECK	RESULT	CAUSE	REMEDY
2. Outlet has proper voltage. Fuse is not open.			
Check continuity of thermal cutout	No continuity	Defective thermal cutout	Replace
Check continuity of power supply cord	No continuity	Open power supply cord	Replace
Disconnect 3-pin connector and check continuity of low voltage transformer (Check between pin no. 1 and 3)	Infinity	Open winding of low voltage transformer	Replace low voltage transformer (in the D.P.C.)
	Approx. 140Ω (Normal)	Defective DPC	Replace

[TROUBLE 3] Display shows all figures selected, but oven does not start cooking even though desired program and time are set and start pad is tapped. (Cooking time counts down.)

CHECK	RESULT	CAUSE	REMEDY
1. Oven lamp, turntable and fan motor do not turn on.			
Check DC voltage being applied to power relay A coil with start pad tapped.	Approx. 18V DC	Faulty contacts of power relay A or open relay coil (NOTE 2)	Replace
	0V	Defective DPC	Replace

NOTE 2: During trouble 3, the oven lamp does not turn on when door is opened.

CHECK	RESULT	CAUSE	REMEDY
2. Oven lamp turns on but turntable and fan motor do not.			
Check continuity of latch switch B	No continuity	Malfunction of latch switch B	Adjust or replace
	Continuity	Loose connection of latch switch B's wiring	Repair
Check continuity of latch switch A (for NE-7865, NE-7860, NE-7845 only)	No continuity	Malfunction of latch switch A	Adjust or replace
	Continuity	Loose connection of latch switch A's wiring	Repair

[TROUBLE 4] No microwave oscillation even though fan motor and turntable rotate.

CHECK	RESULT	CAUSE	REMEDY
Check DC voltage being supplied to power relay B coil (NOTE 3)	0V	Defective digital programmer circuit	Replace
	Normal	Faulty contacts of power relay B or open relay coil	Replace
		Malfunction of latch switch A (for NE-7865C,NE-7860C only)	Adjust or replace
		Open lead wire (Ref. No. W3) (Refer to figure WIRING MATERIAL on page 45) (NOTE 4)	Replace lead wire (Ref No. W3) and also magnetron
		Open winding of high voltage transformer or faulty insulation of filament winding (NOTE 5)	Replace
		Shorted diode (NOTE 5)	Replace
		Faulty magnetron (NOTE 5)	Replace

NOTE 3: Disconnect two lead wires connected to the power relay B coil.
Set power at High and set any time.
Normal digital programmer circuit should read approx. 18V DC continuously.

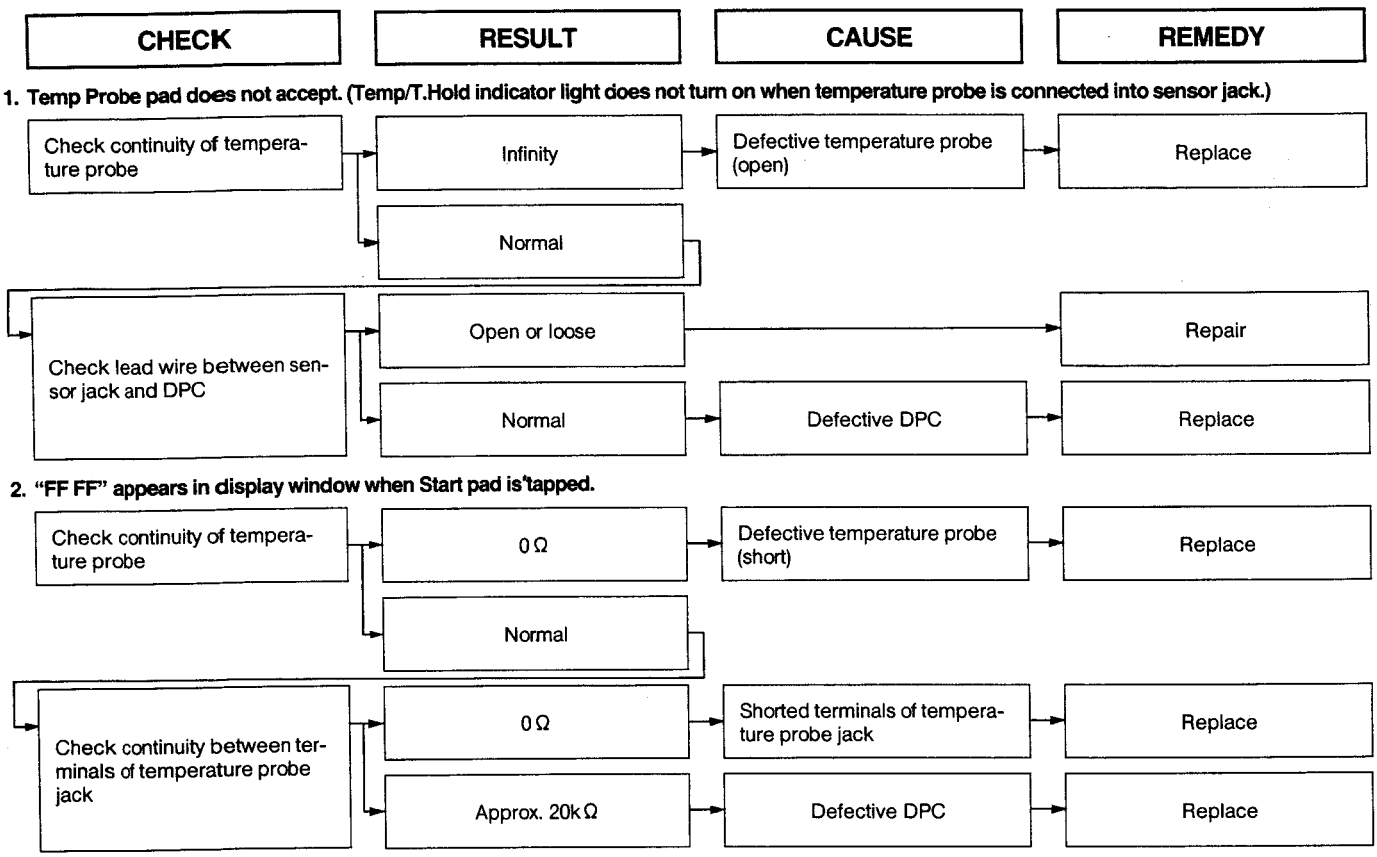
NOTE 4: Unlike previous models, no protector is provided on lead wire W3.
When magnetron filament is short-circuited, this W3 lead wire will be burnt and act as a protector.
When this lead wire is open, replace together with magnetron.

NOTE 5: Refer to component test procedure on page 32.

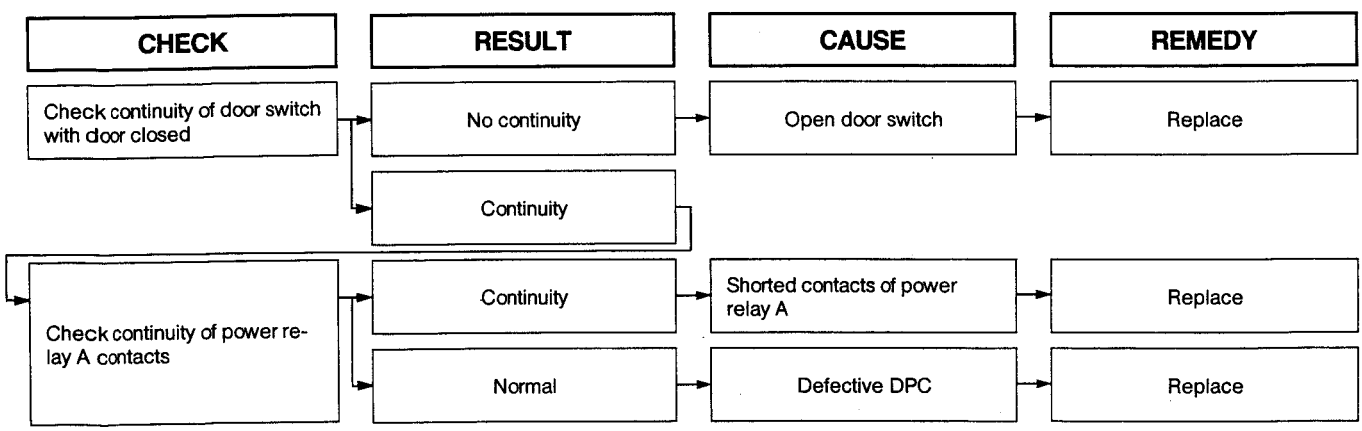
[TROUBLE 5] Microwave output power is low. First of all, check if output is really low by following "Measurement of magnetron's output" on page 33.

CHECK	RESULT	CAUSE	REMEDY
Check the power source voltage with magnetron oscillating.	Lower than 105 volts	Decrease in power source voltage	Customer education
	Normal		
Check the timing periods of the 18V DC being applied to the power relay B coil (refer to page 26 for the timing periods of the power relay B)	Abnormal	Defective digital programmer circuit	Replace
	Normal	Aging change of magnetron	Replace depending on the result of output test

[TROUBLE 6] Microwave oven does not operate normally when using temperature probe. (For NE-7865, NE-7865C, NE-7845 only)

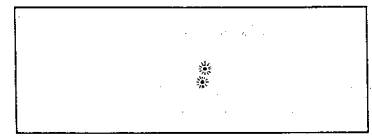
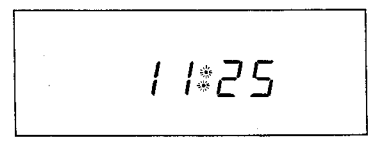
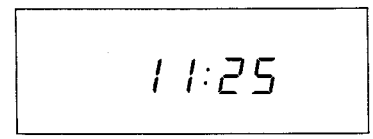


[TROUBLE 7] Oven lamp and fan motor turn on when power supply cord is plugged into wall receptacle.

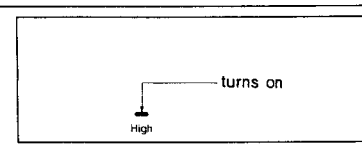
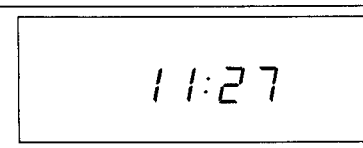
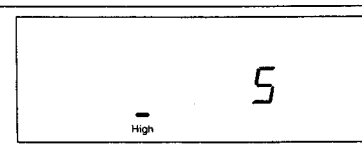
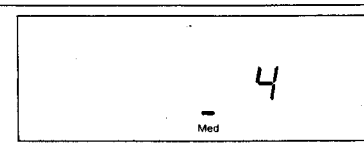
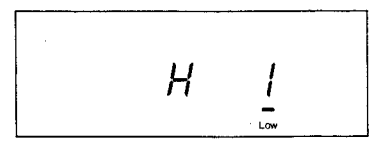
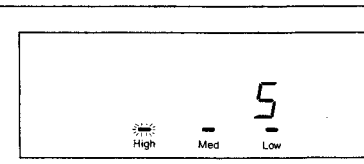
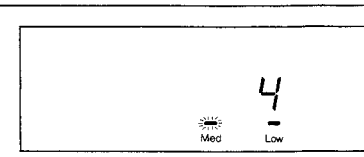


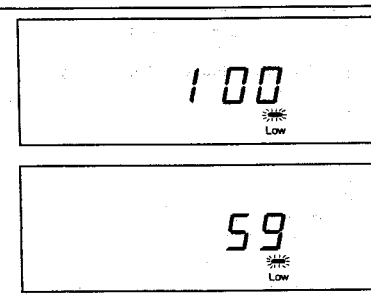
DIGITAL PROGRAMMER CIRCUIT TEST PROCEDURE

1. To Set Clock

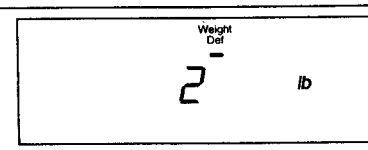
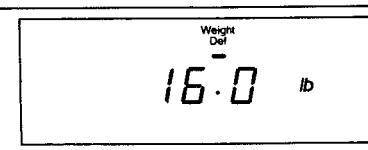
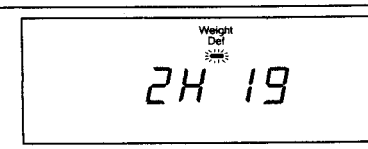
STEP	OPERATION	FUNCTION	DISPLAY
1	Plug the power supply cable into wall receptacle.	• Colon starts blinking.	
2	Enter time of day (TOD) by tapping appropriate number pads. Example : To Set 11 : 25 • Tap 10 min pad once • Tap 1 min pad once • Tap 10 sec pad twice • Tap 1 sec pad 5 times	• Numbers tapped are displayed in the display window. • Colon keeps blinking.	
3	Tap Clock Pad.	• Colon stops blinking and stays on. • TOD has now been registered into the digital programmer circuit and will count up by minutes.	

2. Time Cooking/Three Stage Cooking

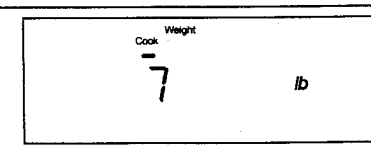
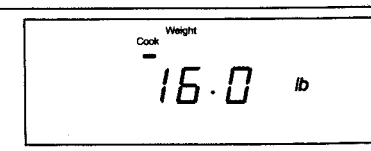
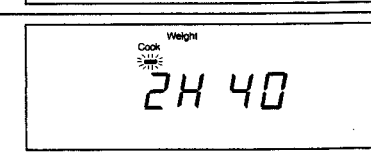
STEP	OPERATION	FUNCTION	DISPLAY
1	Place a water load in the oven.		
2	Tap Power Pad.(Example : Tap power select pad once for high power setting.)	• Clock time disappears. • HIGH power indicator light turns on.	
3	Tap Stop/Reset Pad.	• The display window will show TOD again.	
4	Select HIGH power and set for 5 seconds by tapping the appropriate pads. (1st stage)	• Clock time disappears. • HIGH Power indicator light turns on. • Display window shows "5".	
5	Set MED power for 4 seconds. (2nd stage)	• First stage cooking time "5" and HIGH power indicator light disappear. • MED power indicator light turns on. • Display window shows "4".	
6	Set LOW power for 1 minute. (3rd stage) Tap Power Select Pad 5 times and 1 second pad once.	• Second stage cooking time "4" and MED power indicator light disappear. • LOW power indicator light turns on. • Display window shows "H 1". **NOTE: When LOW power is selected, H meaning Hour appears in display window and cooking time is shown in hours and minutes.**	
7	Tap Start Pad. (1st stage)	• Oven light turns on. • Microwave activity starts. • Third stage cooking time disappears. • LOW power indicator light stays on. • HIGH and MED power indicator lights turn on. • Turntable begins to rotate. • First stage cooking time "5" appears and counts down by seconds. • HIGH (1st stage) power indicator light begins to blink.	
8	(2nd stage)	• After completing 1st stage program, oven automatically switches to 2nd stage. • HIGH (1st stage) power indicator light turns off. • MED (2nd stage) power indicator light starts to blink. • LOW (3rd stage) power indicator light remains on. • Display window indicates "4" and starts counting down by seconds.	

STEP	OPERATION	FUNCTION	DISPLAY
9	(3rd stage)	• After completing 2nd stage program, oven automatically switches to 3rd stage. • MED (2nd stage) power indicator light turns off. • LOW (3rd stage) power indicator light starts to blink. • Display indicates "1 00" and starts counting down by seconds.	
10	When third stage cooking ends, oven beeps five times and shuts off automatically.		• TOD appears in display window.

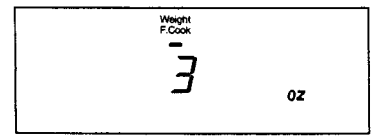
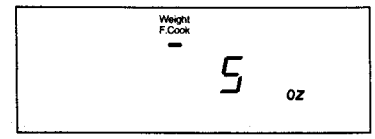
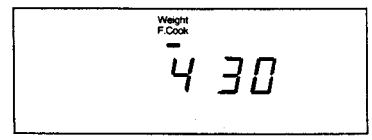
3. Auto Weight Defrost

STEP	OPERATION	FUNCTION	DISPLAY
1	Tap Auto Weight Defrost Category Pad 2 times to select Defrost Category 2.	• Clock time disappears. • Category number "2" appears in the display window. • Auto Weight Defrost indicator light turns on. • "lb" appears in the display window.	
2	Set the weight to 16 pounds by tapping 1.0 (lb) pad 16 times.	• Category number "2" disappears and the weight selected appears in the display window.	
3	Tap Start Pad.	• Oven light turns on. • Microwave defrosting begins. • Auto Weight Defrost indicator light begins to blink. • Turntable begins to rotate. • Weight in display window disappears. • Defrosting time "2H 19" appears and counts down.	
4	Tap Stop/Reset Pad 2 times.	• Oven shuts off. • The display window will show TOD again.	

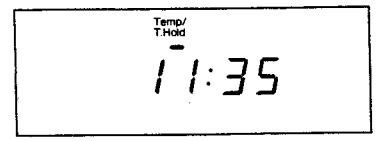
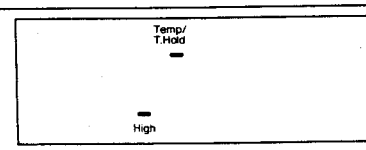
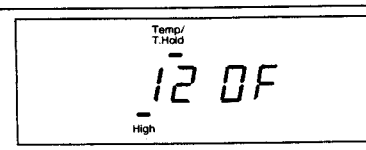
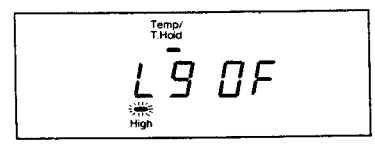
4. Auto Weight Cook (For NE-7860,NE-7860C only)

STEP	OPERATION	FUNCTION	DISPLAY
1	Tap Auto Weight Cook Category Pad 7 times to select Cook Category 7.	• Clock time disappears. • Category number "7" appears in the display window. • Auto Weight Cook indicator light turns on. • "lb" appears in the display window.	
2	Set the weight to 16 pounds by tapping 1.0 (lb) pad 16 times.	• Category number "7" disappears and the weight selected appears in the display window.	
3	Tap Start Pad	• Oven light turns on. • Microwave cooking begins. • Auto Weight Cook indicator light begins to blink. • Turntable begins to rotate. • Weight in display window disappears. • Cooking time "2H 21" appears and counts down.	
4	Tap Stop/Reset Pad 2 times.	• Oven shuts off. • The display window will show TOD again.	

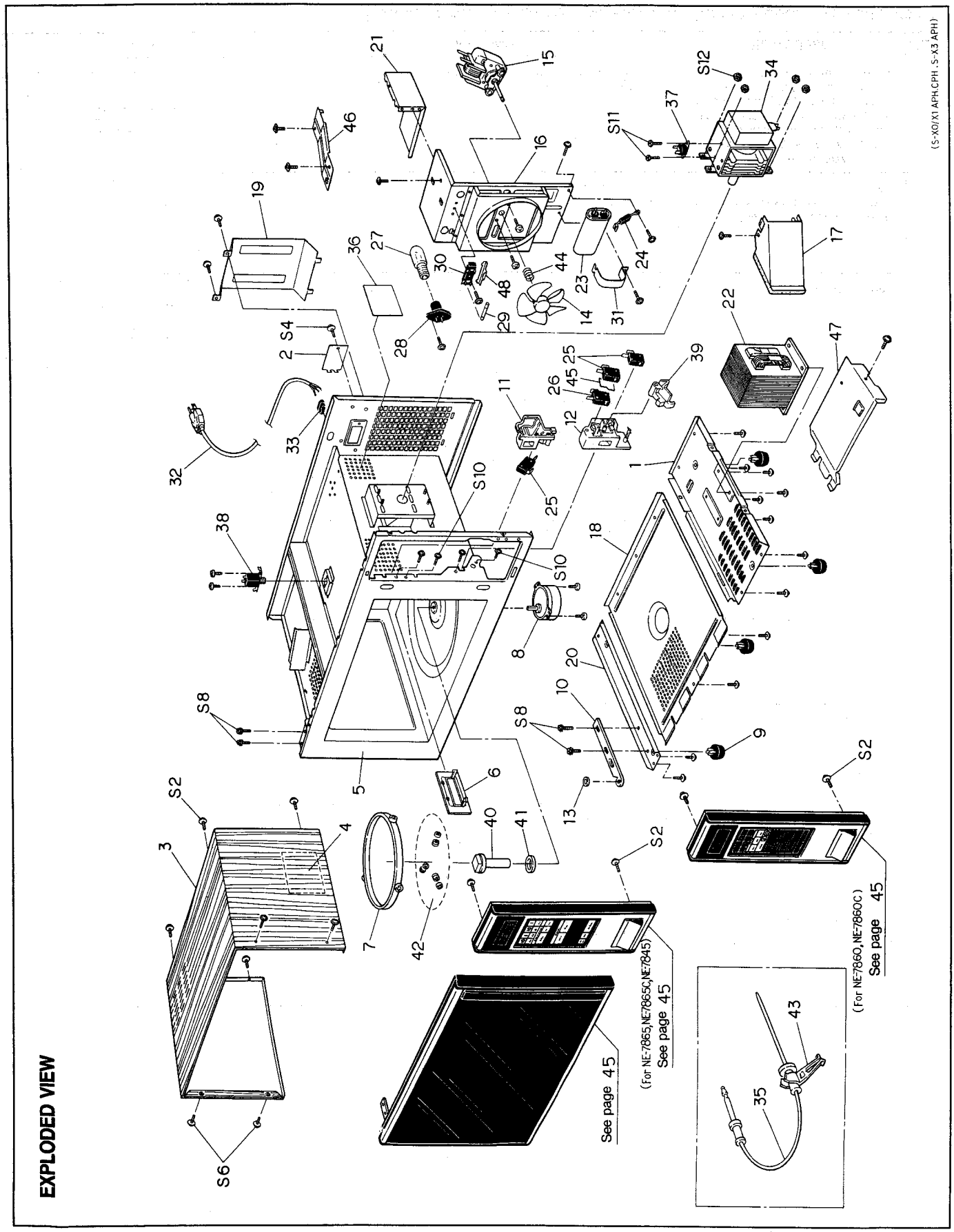
5. Auto Weight Frozen Cook (For NE-7860, NE-7860C only)

STEP	OPERATION	FUNCTION	DISPLAY
1	Tap Auto Weight Frozen Cook pad 3 times	• Clock time disappears. • Category number "3" appears in the display window. • Auto Weight Frozen Cook indicator light turns on. • "oz" appears in the display window.	
2	Set the weight to "5 oz" by tapping 0.1(lb)/1(oz) pad 5 times	• Category number "3" disappears. • "5" appears in the display window.	
3	Tap Start pad.	• Oven light turns on. • Microwave cooking begins. • Turntable begins to rotate. • Auto Weight Frozen Cook indicator light begins to blink. • Cooking time "4 30" appears and counts down.	
4	Tap Stop/Reset pad 2 times	• Oven shuts off. • The display window will show TOD.	

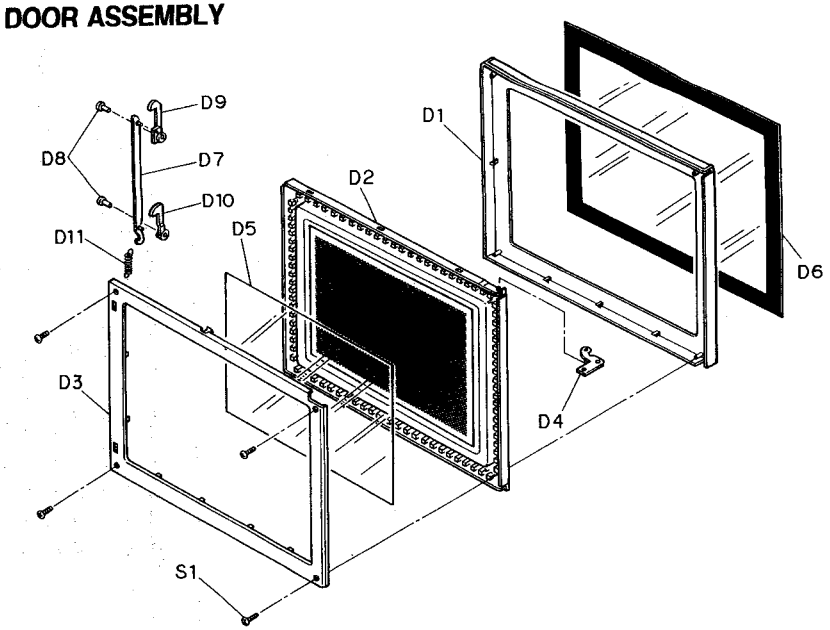
6. Temperature Probe Cooking (For NE-7865, NE-7865C, NE-7845 only)

STEP	OPERATION	FUNCTION	DISPLAY
1	Remove the hot water load from the oven and replace with a cold water load. Insert the sensor probe into the water load and connect the probe jack into its receptacle. **NOTE: Sensor probe must be into water more than one inch.**	• Temp/T.Hold indicator light turns on. • Clock time stays on.	
2	Tap Power Pad. (Example : Tap power select pad once for high power setting)	• Clock time disappears. • HIGH power indicator light turns on.	
3	Tap Temp Probe Pad 3 times	• "12 0F" appears in display window.	
4	Tap Start Pad.	• Oven lamp turns on. • Microwave activity starts. • Turntable begins to rotate. • HIGH power indicator light begins to blink. • Current temperature of food is displayed in rising 5°F increments starting at 95°F. If starting temperature is lower than 95°F, "L90F" (meaning lower than 95°F) will be displayed until food reaches 95°F.	
		• When water temperature is raised to 120°F ± 11°F, oven beeps five times and shuts off automatically. • TOD appears in the display window.	
5	Measure the water temperature by placing the thermometer in the cup right next to the probe. In this manner they will both sense the same exact temperature the allowable temperature range is 120°F ± 11°F.		
6	Remove the temperature probe from oven wall receptacle.	• Temp/T.Hold indicator light turns off.	
7	Remove the hot water from the oven. Be sure to check T.O.D. is correct.		
8	Tap Clock Pad twice within two seconds.	• TOD disappears. • Colon starts blinking.	

EXPLODED VIEW AND PARTS LIST

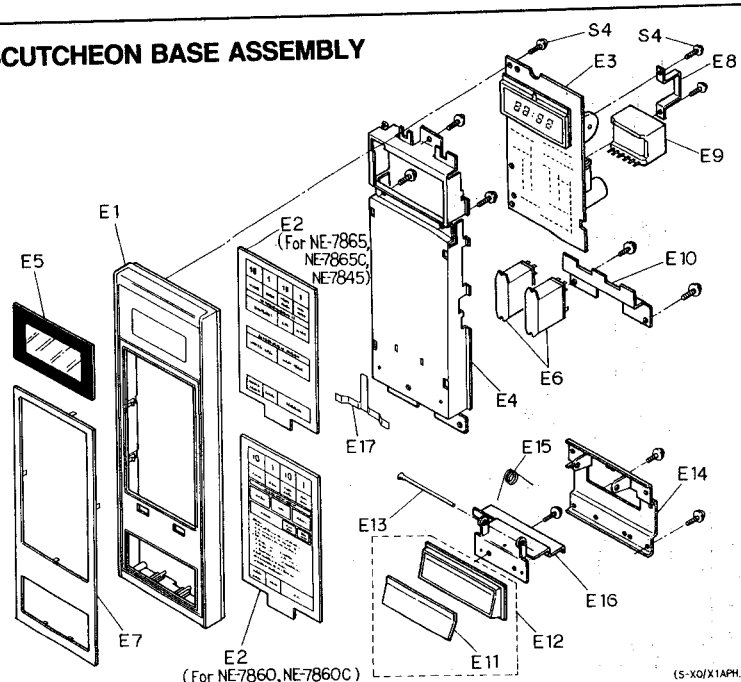


DOOR ASSEMBLY



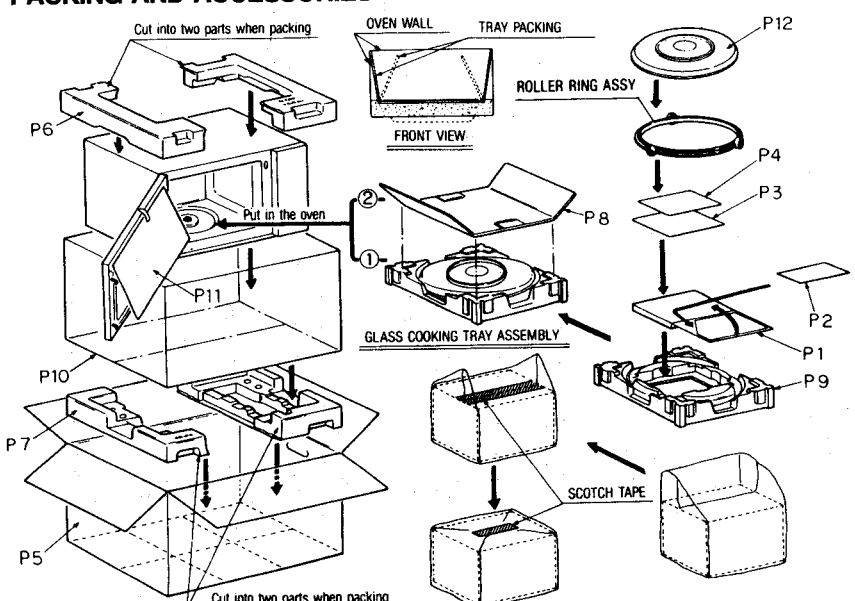
(S-XO/X1APH,CPH,S-X3APH)

ESCUTCHEON BASE ASSEMBLY



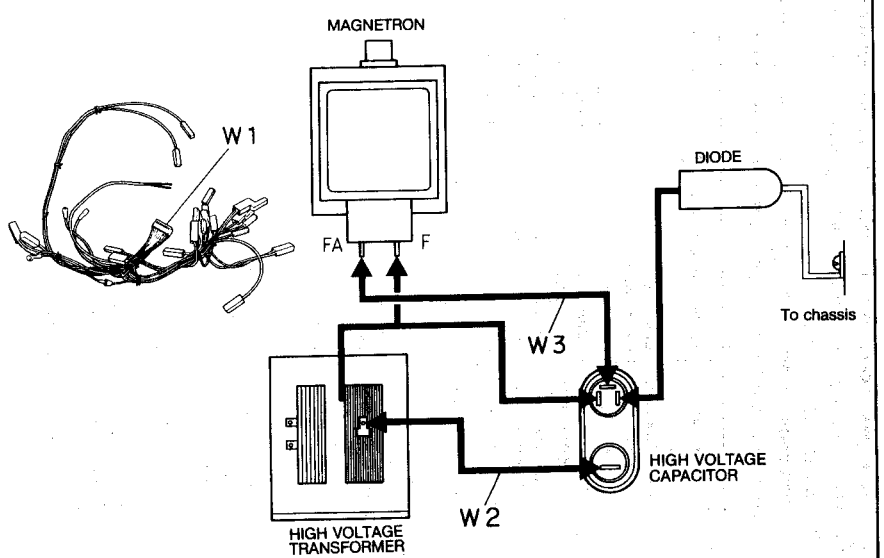
(S-XO/X1APH,CPH,S-X3APH)

PACKING AND ACCESSORIES



(S-XO/X1APH,CPH,S-X3APH)

WIRING MATERIAL



(S-XO/X1APH,CPH,S-X3APH)

PARTS LIST (NE-7865, NE-7865C, NE-7860, NE-7860C, NE-7845)

NOTE 1: When ordering replacement part(s), please use part number(s) shown in this parts list. Do not use description of the part.
2: Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
1		ANE110EX00AQ	Base assy	1	
2		ANE1060X00AP	Lamp cover	1	
3		ANE1009X00AP	Outer panel	1	NOTE 3
4		ANE0001X00AP	Schematic diagram	1	For NE-7865, NE-7845
		ANE0001X00CP	Schematic diagram	1	For NE-7865C
		ANE0001X10AP	Schematic diagram	1	For NE-7860
		ANE0001X10CP	Schematic diagram	1	For NE-7860C
5	⚠	ANE201AX00AP	Oven assy	1	For NE-7865, NE-7865C, NE-7845
	⚠	ANE201AX10AP	Oven assy	1	For NE-7860, NE-7860C
6		ANE2055X00AP	Cover A	1	
7		ANE290DX00AP	Roller ring assy	1	
8		ANE6326X00AP	Turntable motor	1	
9		ANE1008B00SS	Rubber foot	4	
10	⚠	ANE3007X00AP	Lower hinge	1	
11	⚠	ANE3020B00AP	Door hook A	1	
12	⚠	ANE3267X00AP	Door hook B	1	
13		ANE3081B60AP	Door hinge spacer	1	
14		ANE4008X00AP	Fan	1	
15		ANE400AX00AP	Fan motor	1	
16		ANE400RX00AP	Fan motor bracket B	1	
17		ANE4025X00AP	Air guide A assy	1	
18		ANE1026X00AP	Base C	1	
19		ANE4030X00AP	Air guide D	1	
20		ANE1129X00AP	Base B	1	
21		ANE6073X00AP	Oven lamp cover	1	
22	⚠	ANE600BX00AP	H.V.Transformer	1	
23	⚠	ANE6090X00AP	H.V.Capacitor	1	
24	⚠	ANE6202X00AP	Diode	1	
25	⚠	ANE6142-F60	Switch	3	Latch switch A, B, Door switch (V-15G-3C26)
26	⚠	ANE6178-F80	Switch	1	Short switch (V-15-2C25)
27		ANE6030540AP	Oven lamp	1	(125V, 20W)
28		ANE603XB00AP	Oven lamp socket	1	
29	⚠	ANE6230B00AP	Fuse	1	(15A)
30		ANE6231-F50	Fuse holder	1	
31		ANE6037X00AP	Capacitor bracket	1	
32		ANE900CX00AP	Power supply cord	1	For NE-7865, NE-7860, NE-7845
		ANE900CX00CP	Power supply cord	1	For NE-7865C, NE-7860C
33		ANE9027570XN	Cord bushing	1	
34	⚠	2M204-M1	Magnetron	1	NOTE 4
35	⚠	ANE601LG00AP	Sensor probe	1	For NE-7865, NE-7865C, NE-7845
36		ANE6040B00AP	Oven lamp sheet	1	
37		ANE6145G10AP	Thermal cutout	1	
38		ANE601KX00AP	Sensor jack unit	1	For NE-7865, NE-7865C, NE-7845
39		ANE3137X00AP	Hook spacer B	1	
40		ANE200YX00AP	Pulley shaft	1	
41		ANE2177X00AP	Washer	1	
42		ANE202KX00AP	Roller B assy	1	NOTE 5
43		ANE6365910AP	Sensor holder A	1	For NE-7865, NE-7865C, NE-7845
44		ANE4057-F50	Spring	1	
45		ANE6306X00AP	Insulation sheet R	1	
46		ANE5043X00AP	Reinforce bracket	1	
47		ANE6564X00CP	Bracket	1	For NE-7865C, NE-7860C
48		ANE6611X00AP	Spacer	1	
		ANE0887L10AP	Cavity spray paint	1	For repair of painted oven cavity
		ANE0887970AP	Touch-up paint	1	For repair of painted oven cavity

NOTE 3: Please order schematic diagram together.
4: Service part may be supplied only with 2M204-M1.
5: When ordering the roller B assy, each three rollers and washers will be shipped.
When replacing the roller B, each three rollers and washers should be replaced at the same time.
Otherwise the glass cook plate may not turn smoothly.

DOOR ASSEMBLY

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
D1	⚠	ANE302AX00AP	Door A assy	1	
D2	⚠	ANE302KX00AP	Door E assy	1	
D3	⚠	ANE3085X00AP	Door C	1	
D4	⚠	ANE3006X00AP	Upper hinge	1	
D5	⚠	ANE3145X00AP	Door screen A	1	
D6		ANE3146X00AP	Door screen B	1	
D7		ANE301HX00AP	Door key lever B	1	
D8		ANE3056X00AP	Handle pin	2	
D9		ANE3018X00AP	Door key A	1	
D10		ANE3019X00AP	Door key B	1	
D11		ANE3021X00AP	Door key spring	1	

PACKING AND ACCESSORIES

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
P1		ANE000BX00AP	Cook book	1	
P2		ANE0003X00AP	Instruction book	1	For NE-7865, NE-7845
		ANE0003X00CP	Instruction book	1	For NE-7865C
		ANE0003X10AP	Instruction book	1	For NE-7860
		ANE0003X10CP	Instruction book	1	For NE-7860C
P3		ANE0013L50AP	Warranty card	1	For NE-7865, NE-7860, NE-7845
		ANE0013B00CP	Warranty card	1	For NE-7865C, NE-7860C
P4		ANE0169B60AP	Servicenter list	1	For NE-7865, NE-7860, NE-7845
		ANE0169B60CP	Servicenter list	1	For NE-7865C, NE-7860C
P5		ANE0102X00AP	Outer case	1	For NE-7865
		ANE0102X00CP	Outer case	1	For NE-7865C
		ANE0102X10AP	Outer case	1	For NE-7860
		ANE0102X10CP	Outer case	1	For NE-7860C
		ANE0102X30AP	Outer case	1	For NE-7845
P6, 7		ANE010AX00AP	Filler set	1	
P8		ANE0108X00AP	Tray packing	1	
P9		ANE0113B60AP	Tray styrol	1	
P10		ANE0106910AP	Vinyl cover	1	
P11		ANE0107580AP	Door sheet	1	
P12		ANE0601B00AP	Glass cooking tray	1	

ESCUTCHEON BASE ASSEMBLY

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
E1		ANE800LX00AP	Escutcheon base assy	1	
E2		ANE6479X00AP	Membrane switch	1	For NE-7865, NE-7865C
		ANE6479X10AP	Membrane switch	1	For NE-7860, NE-7860C
		ANE6479X30AP	Membrane switch	1	For NE-7845
E3		ANE603LX00AP	D.P.Circuit assy	1	For NE-7865, NE-7865C, NE-7845
		ANE603LX10AP	D.P.Circuit assy	1	For NE-7860, NE-7860C
E4		ANE8127X00AP	Bracket	1	
E5		ANE8126X00AP	Smoke panel assy	1	For NE-7865, NE-7865C, NE-7845
		ANE8126X10AP	Smoke panel assy	1	For NE-7860, NE-7860C
E6		ANE6126X00AP	Power relay	2	NOTE 6 (G4W-11123T-US)
E7		ANE8001X00AP	Escutcheon A	1	For NE-7865, NE-7865C, NE-7860, NE-7860C
		ANE8001X30AP	Escutcheon A	1	For NE-7845
E8		ANE6551B00AP	Holder bracket	1	For L.V.Transformer
E9		ANE6249X00AP	L.V.Transformer	1	(ETP41K86A)
E10		ANE6246X00AP	Power relay bracket	1	
E11		ANE8321X00AP	Door button panel	1	
E12		ANE891PX00AP	Door opening button	1	
E13		ANE8191X00AP	Cook lever shaft	1	
E14		ANE8192X00AP	Cook lever bracket	1	
E15		ANE8194Q40AQ	Cook lever spring	1	
E16		ANE8256X00AP	Door opening lever	1	
E17		ANE8264X00AP	Ground metal	1	

NOTE 6: When re-installing a power relay A or B, make sure a correct power relay is used as follows;
Power relay A·····Type G4W-11123T-US (White case) or Type JC1af-TM (Gray case)
Power relay B·····Type G4W-11123T-US
Service parts may be supplied only with Type G4W-11123T-US.

WIRING MATERIAL

Ref. No.		Part No.	Part Name & Description	Pcs/ Set	Remarks
W1		ANE030AX00AP	Lead wire harness	1	For NE-7865, NE-7845
		ANE030AX00CP	Lead wire harness	1	For NE-7865C
		ANE030AX10AP	Lead wire harness	1	For NE-7860
		ANE030AX10CP	Lead wire harness	1	For NE-7860C
W2		ANE0350X00AP	Lead wire	1	
W3		ANE0351X00AP	Lead wire	1	NOTE 7

NOTE 7: When this lead wire is open, replace together with magnetron.

STANDARD PARTS

Ref. No.		Part No.	Description	Size (mm)	Q'ty	Usage
S1		XTBANE4+12FK	Screw	4X12	4	Door C
S2		XTWANE4+12E	Screw	4X12	2	Escutcheon base
					1	Diode ground
					1	Power supply cord ground
					4	Outer panel
					4	Fan motor bracket B
					1	Reinforce bracket
S3		XTNANE4+8B	Screw	4X8	2	Turntable motor
S4		XTWANE4+12B	Screw	4X12	1	Capacitor bracket
					4	Base
					3	Base B
					4	H.V.Transformer
					1	Oven lamp socket
					2	Air guide D
					2	Base C
					1	Lamp cover
					2	Holder bracket
					1	D.P.Circuit
S5		XTNANE4+10B	Screw	4X10	1	Fuse holder
S6		XTC4+12BC	Screw	4X12	4	Outer panel
S7		XTWANE4+8S	Screw	4X8	2	Fan motor
S8		XYEANE5+E12S	Screw	5X12	2	Upper hinge
					2	Lower hinge
S9		XTW4+12Q	Screw	4X12	4	Bracket
					2	Cook lever bracket
					1	Door opening lever
S10		XTW4+12T	Screw	4X12	2	Door hook A
					2	Door hook B
S11		XTEANE3+6B	Screw	3X6	2	Thermal cutout
S12		XNWANE5ES	Nut	M5	4	Magnetron
S13		XTNANE3+6B	Screw	3X6	2	Temperature probe jack (For NE-7865, NE-7865C, NE-7845)
S14		XYF4+AF6	Screw	4X6	1	Air guide A
					1	Reinforce bracket

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S-X0/X1APH,CPH S-X3APH
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